



# THE GEORGIA TEACHING FORCE 2001

**STATUS REPORT 2001**  
**OCTOBER, 2001**

A Report of the Supply, Demand, and  
Utilization of Pre-Kindergarten – Twelfth  
Grade Teachers in Georgia Public Schools

**Division for Educator Workforce  
Research and Development**

**Georgia Professional Standards Commission**



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GRADE TEACHERS IN GEORGIA PUBLIC SCHOOLS**

**November, 2001**

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# TABLE OF CONTENTS

LIST OF TABLES	III
LIST OF FIGURES	V
ACKNOWLEDGEMENTS	VI
EXECUTIVE SUMMARY	VII
<b>CHAPTER 1: PROFILE OF GEORGIA’S TEACHING WORKFORCE</b>	
Introduction	1
Demographic Summary	1
<u>Workforce Size</u>	1
<u>Gender and Ethnicity</u>	2
<u>Age and Experience</u>	4
<u>Certification Level</u>	6
<u>Subject Areas</u>	7
<u>RESA Workforce Counts</u>	9
<u>Out-of-Field Teaching in Georgia’s High Schools</u>	10
<u>Out-of-field Teaching in Georgia’s Middle Schools</u>	11
<b>CHAPTER 2: TEACHER DEMAND IN GEORGIA</b>	
Introduction	13
Student Enrollment Demand	13
<u>Student Enrollment Counts</u>	13
<i>Student Enrollment Ethnicity Profile and Demand Implications</i>	14
<i>Student Enrollment by RESA</i>	14
<u>Reasons for the Growth in Student Enrollment</u>	15
<i>Population Migration</i>	15
<i>Live Births</i>	16
<i>Student Enrollment Projections</i>	17

Policy Change in Class Size	19
<u>Teacher Demand Based on Student Enrollment and Reduced Class Size</u>	19
<u>Teacher Demand by Subject</u>	21
Attrition	22
<u>Attrition in Georgia and the United States</u>	22
<u>The Attrition Cycle: An Overview</u>	23
<i>Teachers that Leave</i>	24
<i>Attrition Due to Promotions and Reassignments</i>	24
<i>Teacher Mobility and Intersystem Relocations</i>	24
<i>Attrition Due to Retirement</i>	27
<i>Retirement Attrition Counts by Selected Job Categories</i>	27
<i>Retirement Counts by RESA</i>	28
<u>Attrition of New Teachers</u>	29
<u>Attrition by Teaching Category</u>	30
<u>Age of Exiting Teachers in FY00</u>	31
<u>Experience Level of Exiting Teachers in FY00</u>	32
<u>Attrition by RESA</u>	32
<i>The Highest Teacher Attrition Rates by RESA in FY00</i>	33
<u>Economic Factors</u>	34

## **CHAPTER 3: GEORGIA TEACHER SUPPLY**

Introduction	35
Teacher Shortages	35
<u>Implied Shortages by Field</u>	36
<u>Implied Shortages by RESA</u>	37
Sources of Teachers Supply	38
<u>Retention</u>	39
<u>Newly Prepared Georgia Teachers</u>	39
<i>Student Teacher Production by Field</i>	40
<i>Student Teacher Production by Institution</i>	41
<u>Alternative Preparation</u>	43
<u>New Teacher Hires</u>	44
<i>Subject Areas for Newly Hired Teachers</i>	44
<i>New Teacher Grade Level Placements</i>	46
<i>Demographics of New Teacher Hires</i>	46
<i>Certification Levels of New Teacher Hires</i>	47
<u>Out-of-State Teachers</u>	47
<u>Teacher Supply in Georgia's High Schools</u>	48
Recent Student Teacher Production in High School Core Academic Subjects	48
<i>Geographical Distribution of Newly Hired High School Teachers</i>	49
<u>Supply Forecast Issues</u>	53

## **CHAPTER 4: CONCLUSIONS & RECOMMENDATIONS**

Conclusions	54
Recommendations	55

## LIST OF TABLES

<b>Table 1.1. Demographic Profile by Gender of Georgia Teachers, FY01</b>	<b>3</b>
<b>Table 1.2. Demographic Profile by Ethnicity of Georgia Teachers, FY01</b>	<b>3</b>
<b>Table 1.3. Average Age of All Teachers</b>	<b>4</b>
<b>Table 1.4. Certification Level of FY01 Teachers</b>	<b>6</b>
<b>Table 1.5. Georgia Teacher Workforce by Grade Level and Personnel Category, FY97-FY01</b>	<b>7</b>
<b>Table 1.6. Count of Teachers by RESA, FY01</b>	<b>10</b>
<b>Table 1.7. Out-of-Field Teaching in Georgia High Schools, FY01</b>	<b>10</b>
<b>Table 1.8. High School Out-of-Field Percentages by RESA</b>	<b>11</b>
<b>Table 1.9. Out-of-Field Teaching in Georgia Middle Schools, FY01</b>	<b>12</b>
<b>Table 2.1. Student Enrollment Counts by Grade Level, FY97-FY11</b>	<b>14</b>
<b>Table 2.2. Student Enrollment by RESA, FY97-FY01</b>	<b>15</b>
<b>Table 2.3. Student Enrollment Continuation Ratios</b>	<b>18</b>
<b>Table 2.4. Student Enrollment Continuation Ratios by RESA</b>	<b>18</b>
<b>Table 2.5. Projected Teacher Demand Based on Reduced Class Size and Projected Enrollment, FY02-FY11</b>	<b>20</b>
<b>Table 2.6. Teacher Demand Model, 2001</b>	<b>21</b>
<b>Table 2.7. Teacher FTE Counts and Projected Demand by Subject, FY97-FY11</b>	<b>22</b>
<b>Table 2.8. School Systems with High Rates of Attrition Due to Relocations</b>	<b>25</b>
<b>Table 2.9. Attrition Among Larger School Systems</b>	<b>26</b>
<b>Table 2.10. Low- and High-Performing Schools' Teacher Turnover Comparisons</b>	<b>26</b>
<b>Table 2.11. Retirement Attrition Summary by Teaching Category, FY98-FY00</b>	<b>27</b>
<b>Table 2.12. Retirement Proportions and Overall Workforce Category Proportions, FY00</b>	<b>28</b>
<b>Table 2.13. Retirement Counts by RESA, FY98-FY00</b>	<b>28</b>
<b>Table 2.14. Attrition Summary for New Teachers with Zero Experience, FY89-FY00</b>	<b>29</b>
<b>Table 2.15. Comparison of Three-Year Attrition between Graduates of Traditional Teacher Preparation Programs and New Teachers with Provisional Certificates, FY98 to FY01</b>	<b>30</b>
<b>Table 2.16. Attrition Summary by Job Category for All High School Teachers</b>	<b>30</b>
<b>Table 2.17. Personnel Categories of Teachers Who Exited the Classroom, FY00</b>	<b>31</b>
<b>Table 2.18. Attrition by RESA, FY00</b>	<b>33</b>
<b>Table 2.19. Overall Teacher Annual Attrition Rates FY91-FY00</b>	<b>34</b>
<b>Table 3.1 Overall Teacher Annual Attrition Rates, FY91-FY00</b>	<b>35</b>
<b>Table 3.2. Teacher Counts by Permit, Provisional Certificate, and Probationary Certificates, FY01</b>	<b>36</b>
<b>Table 3.3. Permit, Provisional, and Probationary Certification by Selected Areas, FY97-FY11</b>	<b>37</b>
<b>Table 3.4. Distribution of Permits, Provisional, and Probationary Certificates by RESA, FY01</b>	<b>38</b>
<b>Table 3.5. Teacher Retention and Projections (Numbers are FTE Counts)</b>	<b>39</b>

<b>Table 3.6. Student Teachers By Field, FY98-FY01</b>	<b>41</b>
<b>Table 3.7. Student Teacher Production In Georgia Colleges and Universities, FY98-FY01</b>	<b>42</b>
<b>Table 3.8. New Teacher Hires by RESA, FY01</b>	<b>44</b>
<b>Table 3.9. New Teacher Hires Distributed by Subject Taught, FY01</b>	<b>45</b>
<b>Table 3.10. New Teacher Hires Distributed by Personnel Category/Grade Level, FY01</b>	<b>46</b>
<b>Table 3.11. Demographic Profile of New Hires and the Total Georgia Workforce, FY01</b>	<b>47</b>
<b>Table 3.12. Certification Levels of Newly Hired Teachers</b>	<b>47</b>
<b>Table 3.13. Sources of Supply for Specific High School Teaching Fields</b>	<b>48</b>
<b>Table 3.14. Production of Core Content Teachers from Georgia Teacher Preparation Programs</b>	<b>49</b>
<b>Table 3.15. Distribution of All Newly Hired High School Teachers by RESA (All Subjects), FY01</b>	<b>49</b>
<b>Table 3.16. Distribution of Newly Hired High School Teachers in the Four Core Areas by RESA, FY01</b>	<b>50</b>
<b>Table 3.17. New English Teachers as Percentage of All English Teachers by RESA, FY01</b>	<b>51</b>
<b>Table 3.18. New Mathematics Teachers as Percentage of All Mathematics Teachers by RESA, FY01</b>	<b>51</b>
<b>Table 3.19. New Science Teachers as Percentage of All Science Teachers by RESA, FY01</b>	<b>52</b>
<b>Table 3.20. New Social Science Teachers as Proportion of All Social Science Teachers by RESA, FY01</b>	<b>52</b>

## LIST OF FIGURES

Figure 1.1. Total Georgia Workforce, FY97-FY01	2
Figure 1.2. Georgia's Educator Workforce and New Teacher Hires, FY01	2
Figure 1.3. Demographic Profile by Gender of the Teaching Force in Georgia, FY97-FY01	3
Figure 1.4. Demographic Profile by Ethnicity of the Teaching Force in Georgia, FY97-FY01	4
Figure 1.5. Teacher Age, FY01	5
Figure 1.6. Georgia Teachers' Experience, FY01	5
Figure 1.7. Certification Level of Georgia Teachers, FY97-FY01	6
Figure 1.8. Georgia Middle Grades Teacher Workforce by Personnel Category, FY97-FY01	8
Figure 1.9. RESA Boundaries	9
Figure 2.1. Georgia Live Birth Counts, FY95-FY99	16
Figure 2.2. Overall Annual Teacher Attrition Rates, FY91-FY00	24
Figure 2.3. Attrition by Teacher Age, FY00	31
Figure 2.4. Attrition by Teacher Experience, FY00	32
Figure 2.5. Teacher Attrition by RESA, FY00	33
Figure 2.6. Manufacturing Employment and Teacher Attrition	34
Figure 3.1. Sources of Newly Hired Teachers, FY01	38
Figure 3.2. Newly Prepared Georgia Teachers	40
Figure 3.3 Georgia Student Teacher Production, FY97-FY01	40
Figure 3.4. Alternative Route Teachers as a Percentage of All Newly Hired Teachers	43

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*\*The Division for Educator Workforce Research and Development is a division of the Georgia Professional Standards Commission and is the supply and demand component of Georgia's P-16 Title II Teacher Quality Plan.*



# EXECUTIVE SUMMARY

The Status Report-2001 presents a profile of Georgia's teaching workforce with regards to workforce demographics, teacher demand, and teacher supply. This is the second such endeavor undertaken by the Division for Educator Workforce Research and Development (EWRAD), a division of the Georgia Professional Standards Commission (PSC). The second report is different from the first in that it also presents future projections of demand and supply of teachers in Georgia from FY02 to FY11.

The following summary of the Status Report-2001 highlights key points found in the report.

## DEMOGRAPHIC SUMMARY

- In FY01 Georgia's public educator workforce numbered 110,784 with 94,689 teachers. The educator workforce has been growing annually at a rate of about 3% since FY97. If current growth trends continue, Georgia will employ over 108,000 teachers in FY06 and over 125,000 in FY11.
- In FY01, Georgia hired 11,817 teachers, 8,595 to replace teachers who exited from the FY00 workforce and 3,222 to accommodate growth of student enrollment and other demand increases.
- Georgia's teaching workforce is 82% female and 78% white.
- Retirement counts increased annually from FY98 through FY00, and the increasing trend is likely to continue for at least 5 more years. Over 8,000 of the FY01 educators were over 55 years old, and nearly 10,000 had over 25 years of experience.
- Over half of Georgia's teachers have a Master's degree or above.
- The metropolitan Atlanta area (Metro RESA) employs 36% of all Georgia's teachers and 42% of the new hires, and it continues to grow. It also has the highest attrition rate; one of every nine Metro RESA teachers exited the workforce in FY00.
- Over 95% of all high school teachers teach in their field of certification. However, there are insufficient numbers of middle grades teachers with mathematics and science concentrations. Data collected for the Status Report-2001 suggest that over 20% of middle grades mathematics and science teachers do not have a concentration in the subject they teach.
- A few regional differences were reported in the out-of-field data. Oconee RESA had over 14% of math teachers out-of-field; North Georgia RESA had 8.9% of English teachers out-of-field, First District RESA had 8.8% of social science teachers out-of-field, and Okefenokee RESA had 8.7% of English teachers out-of-field.

## TEACHER DEMAND IN GEORGIA

- Georgia's birth rates increased dramatically in FY97 over the FY96 level, and the increase repeated in FY98 and FY99. The increase in each of these years amounts to nearly 4,000 children a year, many of whom will be entering the public school system as kindergartners starting in FY02. These increases will impact teacher demand greatly in FY02 and, at the least, the following five years.
- According to the Appalachian Regional Commission, Georgia had a net population increase of 796,511 due to civilian and military family migration from 1990 through 1999. These relocating families bring both new school children and new teachers to Georgia.

- In five middle and south Georgia RESAs (i.e., Central Savannah, Chattahoochee, Heart of Georgia, Oconee, and Southwest Georgia) student enrollment has, however, declined between FY97 and FY01.
- Teacher attrition from the FY00 Georgia teaching workforce was 9.4%, the highest attrition rate in ten years. Although increasing retirement accounts for part of that attrition, the attrition rate is predicted to ease within the next two years because of the current declining economy.
- Annually, approximately 4% of Georgia's teachers relocate from one system to another. Teachers in low-performing schools are more likely to leave their school systems to relocate to other systems than are teachers in high-performing schools.
- This year's attrition rate of new teachers entering the workforce in FY00 increased to 15%, up from 11% for FY99 beginning teachers. However, one of every five high school teachers who began their teaching career in Georgia in FY00 left the workforce after their first year. Only about 25% of each year's attrition set can be counted on to return to teaching within the next three years, with minimal returns after the three-year mark
- A large number of high school teachers left their teaching positions after FY00 (1,824). This included 450 who retired and over 250 who were promoted out of the classroom to assume administrative or other non-teaching roles.

#### **TEACHER SUPPLY**

- In FY01, for the first time, Georgia hired more teachers from other states than teachers who were newly prepared in Georgia teacher preparation programs. Since FY97 student teacher production in Georgia colleges has dropped from 5,175 to 3,784, a decrease of over 25%. In order to meet the expected hiring needs in the future, annual teacher production from teacher education institutions needs to be boosted to 5,200 by FY06 and to 6,600 by FY11.
- Teaching fields where teachers were the most difficult to find in FY01 include Interrelated Special Education, Middle Grades, Gifted, Early Childhood, Behavior Disorders, Spanish, Math, English, Science, and ESOL.
- Teacher shortages appeared most acute in Metro, First District, and Northwest Georgia RESAs.
- In FY01, there was a marked increase in the percentage of new teachers who achieved certification through alternative routes; over 1,200 newly hired teachers, about 10% of all newly hired teachers, came to the classroom through alternate routes.
- To encourage even more new teachers to become certified through alternative routes, the Georgia Teacher Alternative Preparation Program (Georgia TAPP) began in the summer of 2001. Over 750 new teachers attended summer sessions and then were hired into teaching positions during the fall of the FY02 school year.
- Georgia English teacher production and demand are out of balance; 817 new English teachers were hired in FY01, the largest single teaching field after elementary and middle grades. However, there were only 185 student teachers in English in FY00. This imbalance will likely continue for a few years, because 799 of Georgia's English teachers were over 55 in FY01. Every RESA, except two, had over 10% of their high school English teachers over 55 years old.

## **CONCLUSIONS AND RECOMMENDATIONS**

- Teacher demand generated by civilian and military family migration into Georgia will likely continue through the next several years as the popularity of metropolitan Atlanta and Georgia serve as a draw to the Southeast.
- Policy initiatives, along with current economic and political conditions will increase the demand for more teachers in the state.
- Staffing and professional development activities will require redefining as the ethnic diversity of Georgia's student enrollment continues to grow and create a demand for specialized teachers.
- Increased recruitment of prospective teachers, especially in some specific areas, must occur at Georgia's public and private teacher preparation institutions to reduce dependence on out-of-state supply to meet teacher demand needs. Some efforts are already underway in public and private teacher education institutions to boost their student teacher numbers. These efforts should be encouraged especially in shortage fields.
- Teacher attrition is costly to both the school systems and the state. The retention of teachers in Georgia schools should be an ongoing concern in the state.
- Teachers supplied from out-of-state sources and alternative routes (including the Georgia TAPP program) continue to be an important addition to Georgia's supply of teachers.
- Office automation procedures, electronic applications, and electronic submissions are conceivable methods by which to increase the speed and ease of the hiring process for both school systems and prospective employees and should be pursued vigorously.
- The allocation of staff development funds to promote professional certification of teachers who are teaching out-of-field may serve to lower this occurrence.
- New teacher hires require formal mentoring and induction programs to ensure their retention. This requires the allocation of funds for such programs.

# CHAPTER 1

## PROFILE OF GEORGIA'S TEACHING WORKFORCE

### Introduction

Educator workforce statistics provide valuable characterization, planning, and assessment information through which to observe and improve Georgia's schools and certified labor force of teachers, administrators, and support personnel. The "Profile of Georgia's Teaching Workforce" describes teachers in the state's public schools during the 2000-2001 school year (FY01). Demographic attributes of public school teachers may change either substantially or slightly during a reporting period. Implications derived from substantial and/or from small, or subtle changes may provide evidence that (a) school improvement efforts and interventions have been successful or unsuccessful, (b) targeted improvements were or were not completed within specified time frames and resource allocations, (c) progress is sustained or short-lived, or (d) serves as alerts to needed policy changes or reinforcement.

Teacher employment data from the Georgia Certified Personnel Information Report (CPI) counts individual teachers in several categories: by individual employment count, by job classification(s) or roles, and/or by the subject(s) taught during a subject assignment load. For example, the Full Time Equivalent (FTE) count shows daily full and part-day teaching assignments by class segments, with portions of the workday signified by decimal fractions. Personnel counts on the CPI show each individual who holds a position that requires a Georgia certificate, and are in whole numbers. Both styles of reporting are valuable, and are identified when included in the Status Report-2001.

### Demographic Summary

#### Workforce Size

The educator workforce has been growing at an annual rate of about 3% since FY97, with significant growth in the number of teaching positions (see Figure 1.1). Georgia's public educator workforce numbered 110,784 in FY01, with 94,689 teachers. In FY01, Georgia hired 11,817 teachers. Of the newly hired teachers, 8,595 replaced teachers who left the FY00 workforce, not returning to any Georgia public classroom for the FY01 school year. Another 3,222 teachers were hired to accommodate student enrollment growth and other demand increases (see Figure 1.2). Over one-half of the new hires were in the larger metropolitan areas of Atlanta, Savannah, Augusta, Macon, and Columbus. Although the Atlanta area typically employs about 35% of all teachers, the FY01 Atlanta metropolitan area hires made up 42% of all new hires in Georgia.

Figure 1.1. Total Georgia Workforce, FY97-FY01

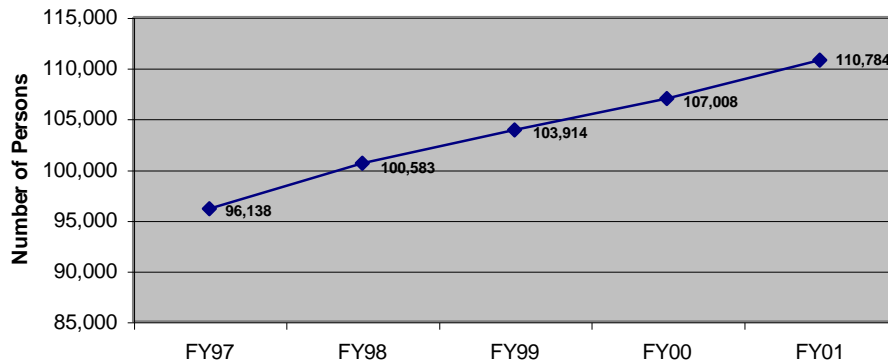
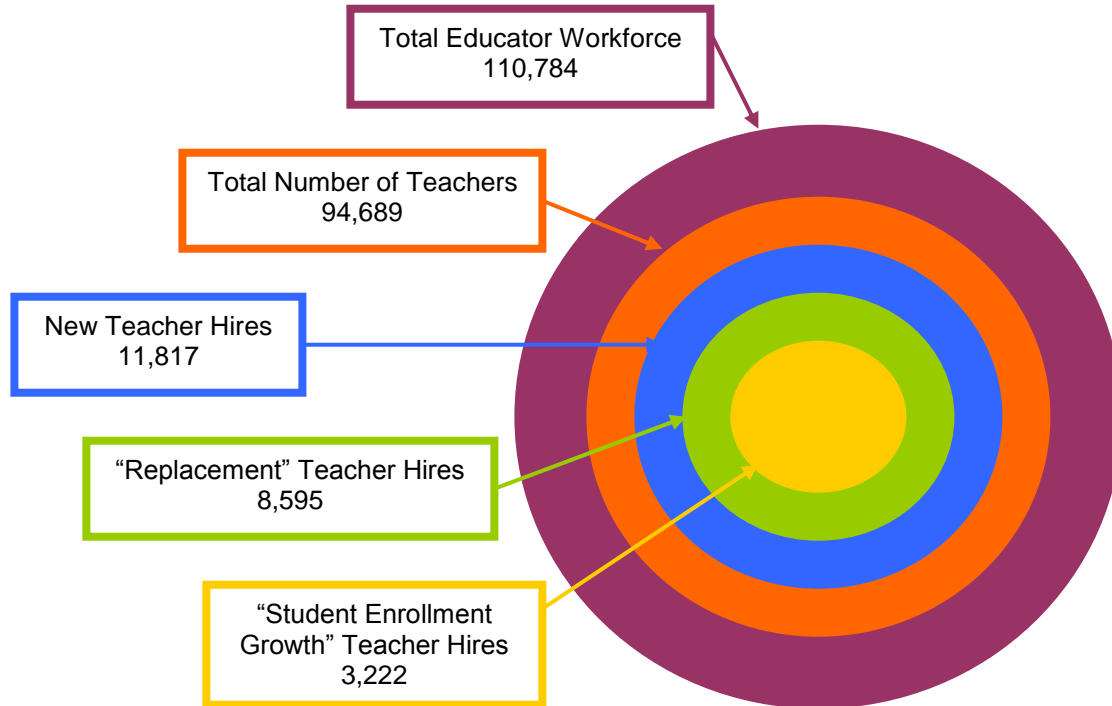


Figure 1.2. Georgia's Educator Workforce and New Teacher Hires, FY01



**Gender and Ethnicity**

Women accounted for 81.3% of all new hires and 82.3% of all teachers were women in FY01 (see Table 1.1 and Figure 1.3), continuing the pattern that has held for many years in Georgia. Blacks accounted for 21% of the newly hired teachers, very close to the proportion of Black teachers in the overall FY01 workforce (see Table 1.2 and Figure 1.4).

Table 1.1. Demographic Profile by Gender of Georgia Teachers, FY01

Gender	#	%
Female	78,019	82.39
Male	16,670	17.61
Total	94,689	100.00

Figure 1.3. Demographic Profile by Gender of the Teaching Force in Georgia, FY97-FY01

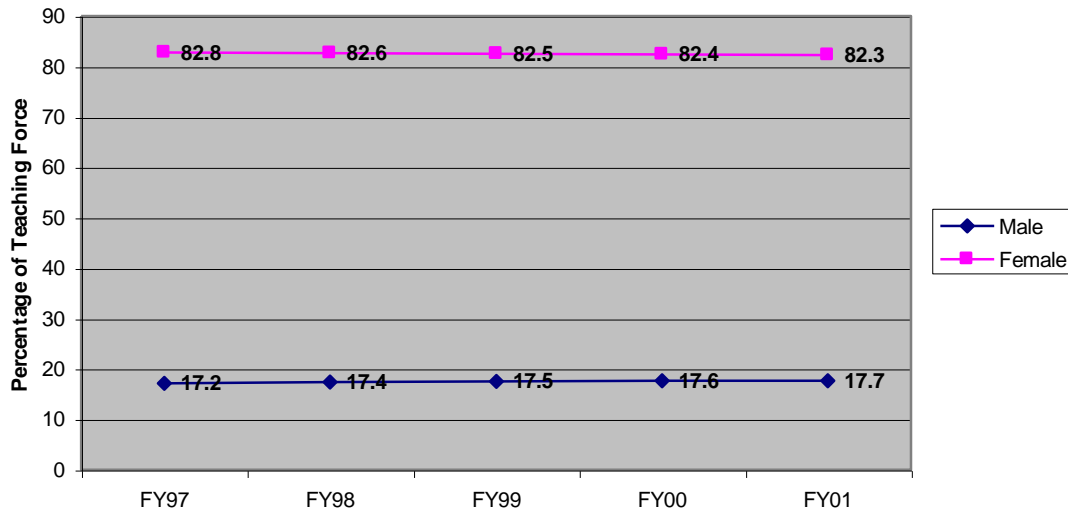
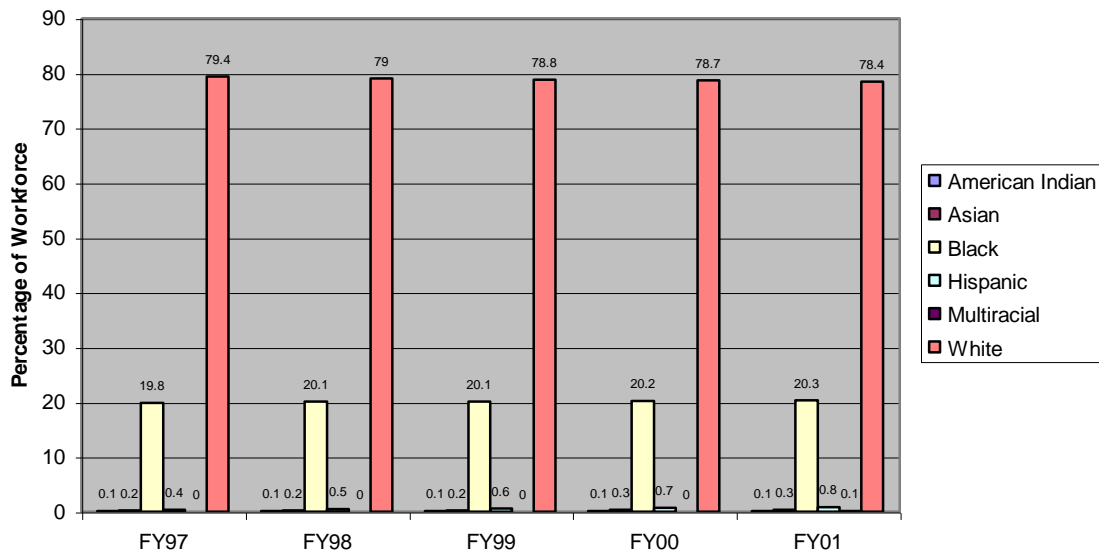


Table 1.2. Demographic Profile by Ethnicity of Georgia Teachers, FY01

Ethnicity	#	%
American Indian	131	0.14
Asian	294	0.31
Black	19,159	20.23
Hispanic	710	0.75
Multiracial	75	0.08
White	74,320	78.49
Total	94,689	100.0

Figure 1.4. Demographic Profile by Ethnicity of the Teaching Force in Georgia, FY97-FY01



### Age and Experience

In FY01, the average age of a Georgia teacher was 41 years, and the average age of newly hired teachers was 34 years (see Table 1.3).

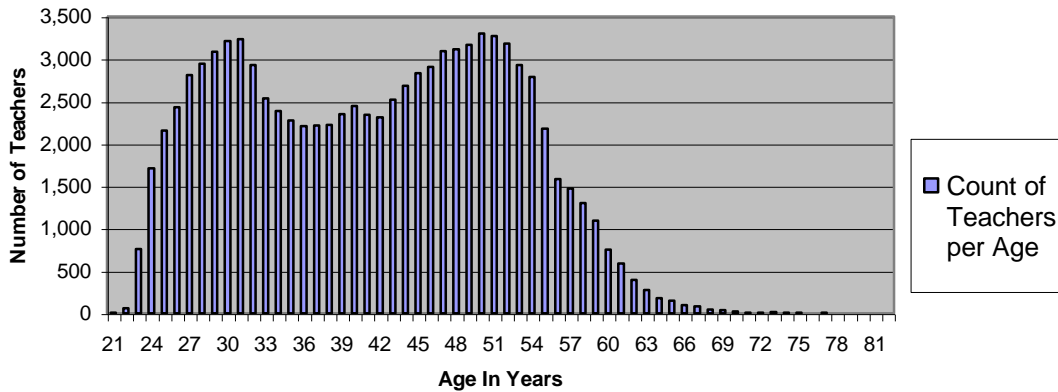
Table 1.3. Average Age of All Teachers

Year	Mean Age
1997	41.2
1998	41.3
1999	41.3
2000	41.4
2001	41.5

More teachers retire as the current workforce grows older. Increased numbers of Georgia's educators are reaching retirement age, promising a greater need for teachers in the future. Files from the Georgia Teacher Retirement System (TRS) show that over 2,000 educators retired from the FY00 workforce, up 200 from FY99 and up 500 from FY98. This rate of retirement is likely to continue for a few years, because over 8,000 of the FY01 educators were over 55 years old and nearly 10,000 had over 25 years of experience.

As an increasing number of teachers retire at 55 years and over, the average age of the remaining workforce will eventually decline. A younger workforce is replacing retiring older teachers. The following graphic (see Figure 1.5) shows that the age decline of teachers has not yet begun. The teacher age chart for FY01 displays a conventional U-shaped curve, indicating a disproportionate number of teachers at younger ages 23-32 and at older ages 46-55. This distribution has not changed its shape significantly over the past five years, except for slight elevations in the counts for teachers ages 50 and above.

Figure 1.5. Teacher Age, FY01



Teacher age and years of experience do not necessarily correspond. The following experience chart (Figure 1.6) for Georgia teachers shows a different shape from the age graphic (Figure 1.5). The decline around ages 30-42 corresponds to child-rearing years. The peak between ages 45 and 52 corresponds to the returning years from teacher stop-outs. A teacher who stops-out at 30 with 6 years of experience and returns at 42 has only 6 or 7 years of experience, despite her age. Also, a number of second career teachers will enter into the workforce at the 40-50 age range and have virtually zero experience.

Figure 1.6. Georgia Teachers' Experience, FY01

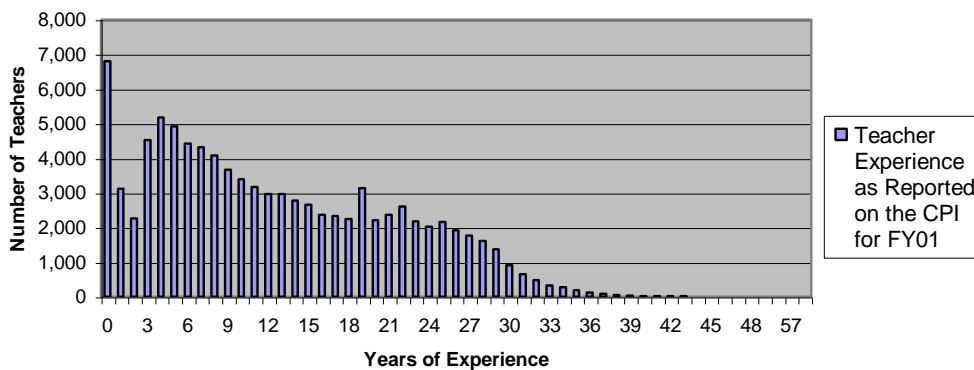


Figure 1.6 indicates a large number of teachers with zero years of creditable Georgia experience, and another peak at 19 years of creditable experience. The apparent dip in experience for years 1 and 2 is due to a practice in Georgia that counts years 0-2 as one-year (i.e., 0), followed by an abrupt jump to show three years of experience. Lastly, the average experience of Georgia teachers was 12.4 years in FY01, though 9,869 (or

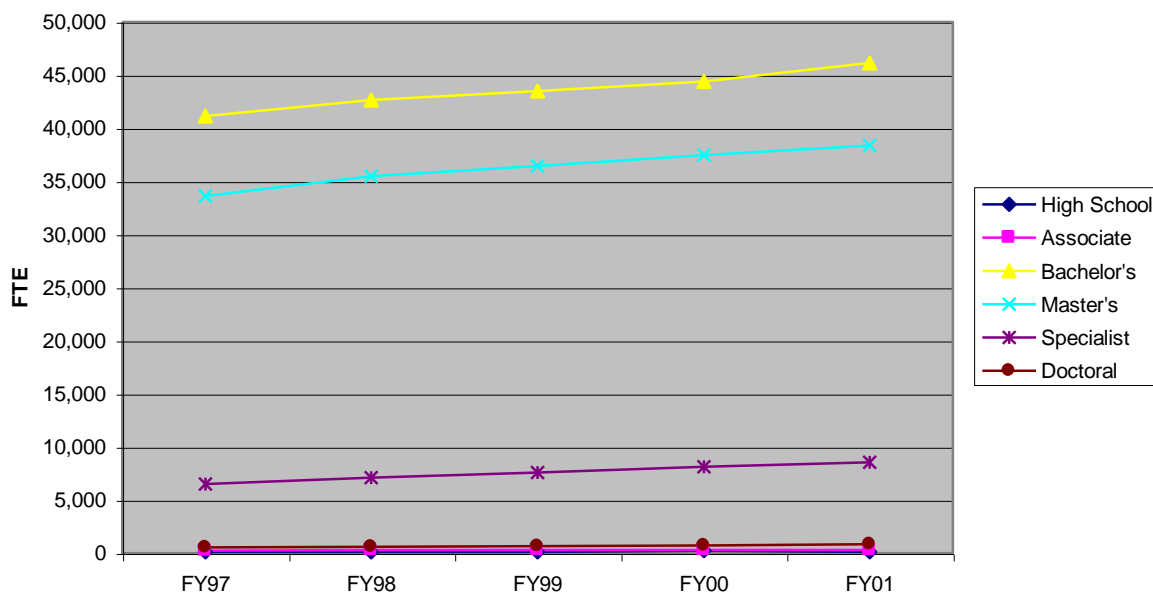


approximately 10.4%) of Georgia’s 94,689 educators had accumulated over 25 years of experience. The corresponding percentage for Georgia’s total educator workforce is 12.73%.

### **Certification Level**

In the Georgia certification taxonomy, “level” refers to a teacher’s academic degree achievement. The level is determined by the Georgia Professional Standards Commission (PSC), based in its rule, 505-2-.10, and is supported by educators’ submission of official post-secondary and post-baccalaureate higher education transcripts or other official and approved evidence of alternative preparation. As Figure 1.7 illustrates, the majority of Georgia’s teachers are found at the Bachelor’s level of certification, followed by the Master’s and then the Specialist level of certification.

Figure 1.7. Certification Level of Georgia Teachers, FY97-FY01



The following table (Table 1.4) shows the distribution of the certification levels of Georgia teachers in FY01. The data show that 48.9% of the teachers are at the Bachelor’s level, which is an increase of 0.2% over FY00’s 48.7%.

Table 1.4. Certification Level of FY01 Teachers

Level	#	%
1 High School	136	0.1
2 Associate	312	0.3
4 Bachelor's	46,321	48.9
5 Master's	38,554	40.7
6 Specialist's	8,537	9.0
7 Doctorate	829	0.9

This small change is significant because it is the first increase in baccalaureate level certified employees since FY97, when 50.1% of Georgia's teachers worked at the bachelor level. This shift may have happened because there were a large number of bachelor level new hires, which affected the percentage distributions in the overall workforce. Over 70% of all FY01 new teacher hires, or 8,281 teachers, were hired at the bachelor level.

### **Subject Areas**

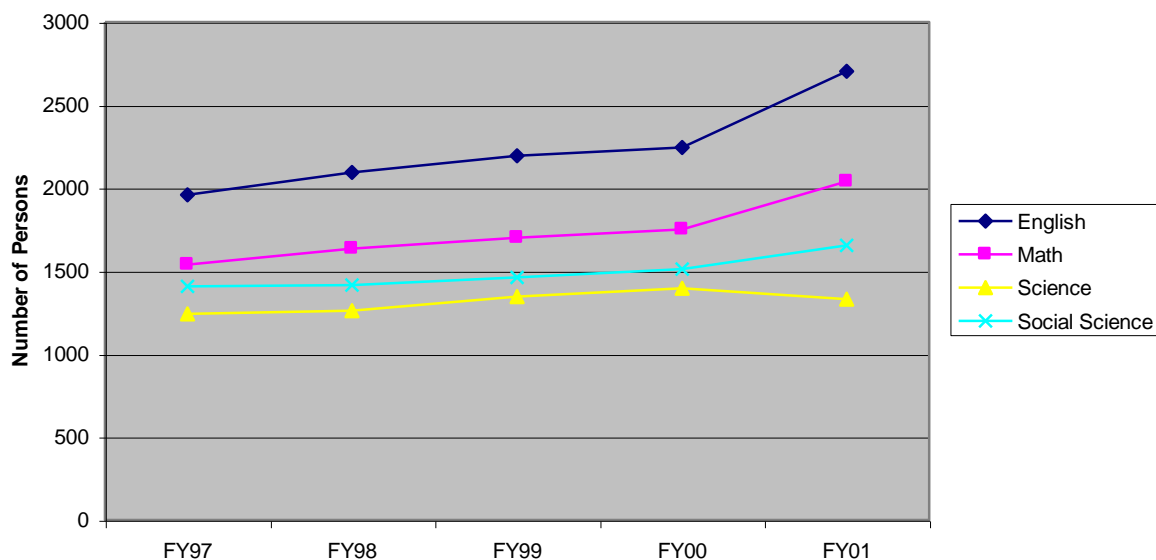
The Status Report-2001 focuses the discussion on the content area of the teaching workforce in the four core academic areas of Mathematics, Science, English, and Social Studies, and on few other selected teaching classifications. The following table (Table 1.5) exhibits fairly uniform growth in all areas; however, middle grades subject areas require special explanation.

Table 1.5. Georgia Teacher Workforce by Grade Level and Personnel Category, FY97-FY01

<b>Personnel Category</b>	<b>FY97</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01</b>	<b>4-Year Average Change</b>	<b>Change FY00-FY01</b>
<b>Middle</b>							
English	1,960	2,093	2,194	2,245	2,702	9.5%	20.4%
Math	1,538	1,634	1,699	1,751	2,040	8.2%	16.5%
Science	1,241	1,261	1,344	1,396	1,329	1.8%	-4.8%
Social Science	1,408	1,416	1,461	1,511	1,653	4.4%	9.4%
<b>High School</b>							
English	2,900	3,277	3,385	3,409	3,350	3.9%	-1.7%
Math	2,577	2,821	2,944	2,994	3,016	4.3%	.7%
Science	2,175	2,618	2,703	2,688	2,746	6.6%	2.2%
Social Science	2,326	2,625	2,706	2,778	2,831	5.4%	1.9%
<b>Special Education</b>							
	9,549	10,206	10,678	11,153	11,698	5.6%	4.9%
<b>Vocational Education</b>							
	2,782	2,742	2,831	2,902	2,898	1.0%	-.1%
<b>Instructional Specialist</b>							
	4,516	4,606	4,800	4,755	4,951	2.4%	4.1%

Over the past two years, education reform efforts in certification requirements and in-field assignment patterns have been targeted to the middle grades 6-8. Effective July 1, 2001, the PSC requires that a teacher show evidence of a minimum of 12 semester concentration hours in each of two subject areas in order to be awarded or renewed with a middle grades teaching certificate. Analysis of the FY97-FY01 CPI records shows a dramatic increase in the number of FY01 over FY00 middle grades teachers assigned to teach English (20.4%) and mathematics (16.5%) and who hold the required 20 approved course hours in English and mathematics from previous years (see Figure 1.8). This positive event is a likely result of the required PSC-subject area rule and of other state initiatives to increase teaching standards by providing middle grades teachers with approved course content.

Figure 1.8. Georgia Middle Grades Teacher Workforce by Personnel Category, FY97-FY01



However. During the same FY97-01 period, an increase of only 1.8% was noted in the percentage of teachers who held 20 more hours of approved science courses and were assigned to teach middle grades science. This increase of credentialed science teachers is noticeably less than is the increase of appropriately credentialed middle grades English and mathematics teachers. In fact, the number of science teachers declined from FY00 to FY01. These data, along with out-of-field data reported in the Status Report-2000 and elsewhere in the Status Report-2001, dramatically suggest that Georgia does not have enough middle grades science teachers who are adequately trained in science. The number of teachers assigned to teach science without a science content concentration (23.7%) causes middle grade students to be instructionally underserved in science by qualified teachers when compared to the other three core content areas.

Since FY00, the PSC has been the lead partner in Georgia's Title II Teacher Quality Enhancement grant activities. These methods are designed to upgrade science and math knowledge through the course work of middle grades teachers in need of training to be considered "in-field" in these content areas. Class enrollments have approached 2000, and more teachers will receive training over the final year of the three-year Title II grant.

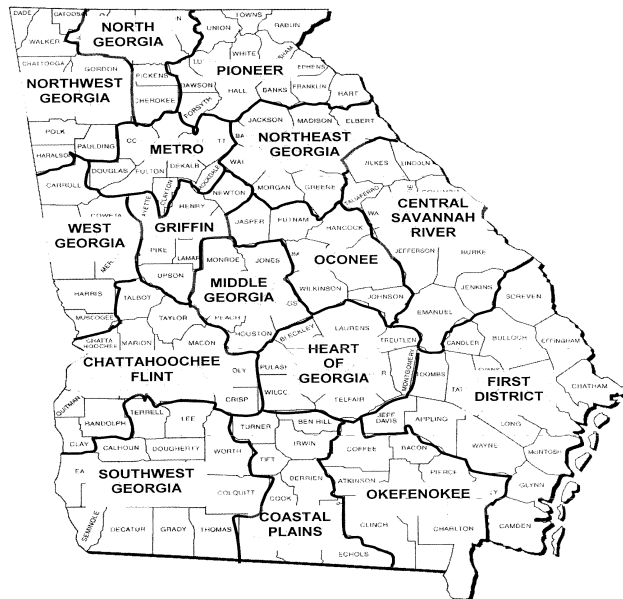
The Georgia Department of Education has implemented funding rules that require middle grade teachers to hold concentration areas in the subjects they teach. As mentioned above, the PSC has begun the phase-in of rule changes that will eliminate the renewal of Middle Grades Generalist certificate in favor of certification for middle grade specialists in the four core academic areas. These two policies alone are not expected to increase the volume of

middle grade science teachers. However, these policies along with increased requirements in teacher preparation institutions, professional development initiatives, and pre-service teacher training practices are expected to significantly impact the deficit of qualified middle grades science and other content area teachers over the next three years.

### **RESA Workforce Counts**

A statewide view of the teacher workforce provides an aggregate understanding of supply and demand. However, Georgia is served by a network of Regional Education Service Agencies (RESAs) which provide its member school systems with a variety of educational and training services, including personnel hiring assistance (see Figure 1.9). Since each school system is a member of a RESA, it is convenient to describe the geographical divisions of the state in RESA areas.

Figure 1.9. RESA Boundaries



RESAs are defined by geographical (county) boundaries, and not by population balance. Therefore, teacher populations in RESA areas are not balanced (see Table 1.6). In particular, the metropolitan Atlanta RESA (Metro RESA) leads the teacher counts by far, with nearly 36% of Georgia’s teachers.

Table 1.6. Count of Teachers by RESA, FY01

RESA	FY01 Teacher Count	Percent of FY01 Teachers
Central Savannah	4,949	5.2
Chattahoochee	3,647	3.9
Coastal Plains	2,841	3.0
First District	7,982	8.4
Griffin	5,081	5.4
Heart of Georgia	1,648	1.7
Metro	33,870	35.8
Middle Georgia	4,014	4.2
North Georgia	3,886	4.1
Northeast Georgia	4,163	4.4
Northwest Georgia	6,325	6.7
Oconee	1,316	1.4
Okefenokee	1,902	2.0
Pioneer	5,015	5.3
Southwest Georgia	4,460	4.7
West Georgia	3,590	3.8

### **Out-of-Field Teaching in Georgia’s High Schools**

The incidence of out-of-field teaching for the four core academic areas was minimal in Georgia high schools in FY01 (see Table 1.7). The highest percentage of out-of-field teaching assignments occurred in English, where 5% of teachers who taught English did so in at least one class section without certification in the field of English. This 5% represented 167 out of 3,350 high school English teachers statewide.

Table 1.7. Out-of-Field Teaching in Georgia High Schools, FY01

A Teaching Field	B Total Teachers in Grades 9-12 By Field	C Grades 9-12 Teachers Certified in the Assigned Teaching Field		D Grades 9-12 Teachers Who Taught Outside Their Certification Field	
		#	% of B	#	% of B
English	3,350	3,183	95.0	167	5.0
Mathematics	3,016	2,889	95.8	127	4.2
Science	2,746	2,677	97.5	69	2.5
Social Science	2,808	2,687	95.7	121	4.3
Total	11,920	11,436	96.3	484	3.7

High school teachers who taught out-of-field in FY01 were further disaggregated by RESA area (see Table 1.8). No clear regional patterns were exhibited, although Oconee RESA had over 14% of math teachers out-of-field. The next highest out-of-field incidences were in North Georgia RESA with English at 8.9%, First District RESA with social science at 8.8%, and Okefenokee RESA with English at 8.7%.

Table 1.8. High School Out-of-Field Percentages by RESA

RESA	English Out-of-Field Percentage	Math Out-of-Field Percentage	Science Out-of-Field Percentage	Social Science Out-of-Field Percentage
Central Savannah	3.0	5.1	1.2	1.9
Chattahoochee	6.3	4.7	2.7	1.7
Coastal Plains	3.1	2.2	0.0	2.6
First District	3.4	6.4	3.1	8.8
Griffin	3.4	3.4	0.6	5.9
Heart of Georgia	5.0	2.0	2.0	2.2
Metro	6.8	4.4	2.7	4.9
Middle Georgia	4.8	3.8	3.8	2.4
North Georgia	8.9	7.9	5.3	5.1
Northeast Georgia	3.1	3.2	1.0	2.7
Northwest Georgia	2.5	3.7	3.0	2.3
Oconee	4.3	14.3	0.0	4.8
Okefenokee	8.7	1.9	2.0	0.0
Pioneer	1.3	1.3	2.3	4.3
Southwest Georgia	4.1	3.4	1.6	3.7
West Georgia	2.4	0.9	4.7	2.9

### **Out-of-field Teaching in Georgia's Middle Schools**

In past years, the most numerous instances of out-of-field teaching in Georgia occurred in middle grade schools, as reported in Status Report-2000. In addition to the requirement for a concentration of 12 semester or more content course hours in at least two content fields, the PSC has instituted policy changes to modify the testing requirements for middle grade teachers. Effective July 1, 2002, Georgia requires all candidates for middle grades certification and renewal to pass Praxis II content tests in two core fields (i.e., English/Language Arts, Mathematics, Science, and Social Studies). Educator preparation institutions have incorporated the new policy into teacher preparation requirements as well. Out-of-field teaching is expected to be virtually eliminated by the year 2005, with a cautionary prediction in science.

An important reason for the frequency of middle grades out-of-field teaching is the mismatch between demand and supply. Too few middle school teachers have graduated from Georgia's teacher preparation programs with mathematics and science concentrations. Middle grades student teacher production in science and mathematics has not met the hiring need in any year since 1988 when the PSC began collecting supply and demand data. For example, in FY01 Georgia hired over 1,700 middle grade teachers. Georgia teacher education programs produced only 673 middle grade teachers the prior year (FY99).

To identify the agreement between the FY01 course assignments for middle grades teachers and in-field certification concentrations, middle grade teachers who have been issued Georgia certificates listing any core content area(s) were isolated in the CPI file and matched to teaching assignments (see Table 1.9). According to the findings:

- 1,019 middle grade teachers were listed as teaching English and had been issued a certificate listing concentration in any field(s). Of those 1,019 teachers of English, 892 (87.5%) held an English/Language Arts concentration.
- 948 were listed as teaching mathematics and had been issued a certificate listing concentrations. Of those 948 teachers of mathematics, 739 (78%) held a mathematics concentration.
- 598 middle grade teachers with concentrations were reported as teaching social studies. Of those 598 teachers of social studies, 555 (92.8%) held social studies concentrations.
- 556 middle grade teachers with concentrations were reported as teaching science. Of those 556 teachers of science, 424 (76.3%) held science concentrations.

Table 1.9. Out-of-Field Teaching in Georgia Middle Schools, FY01

<b>A</b>  <b>Teaching Assignment Field</b>	<b>B</b>  <b>Teachers Reported in the FY01 CPI as Assigned to Teach Subject of Column A and who Held <u>Some</u> Field Concentrations</b>	<b>C</b>  <b>Teachers in Column B who Held the Specific Concentration Field Matching the Teaching Assignment</b>	<b>D</b>  <b>Percent Out-of-Field for Teachers Listed in Column B</b>
English/Language Arts	1,019	892	12.5%
Mathematics	948	739	22.0%
Social Studies	598	555	7.2%
Science	556	424	23.7%

The new PSC certification practice of specifying teaching concentrations on the certificate has made it easy for school systems to know in what area to use a teacher. It is now the school systems' responsibility to ensure in-field assignment of teachers. Apparently, this is still not happening to the extent it should if out-of-field teaching is to be eliminated by 2005, as projected.

## CHAPTER 2

### TEACHER DEMAND IN GEORGIA

#### Introduction

The number of new teachers needed each school year equals the sum of teacher needs engendered by the following three factors:

1. **Increased Enrollment** caused by the growth in student number over the previous year's enrollment.
2. **Policy-based Growth or Decline in the Workforce** caused by the implementation of new and/or revised policies.
3. **Attrition** (in particular, teacher replacement due to attrition) caused by teacher exits from last year's workforce.

This chapter provides detailed descriptions of past and projected enrollment patterns for FY97-FY11, the three factors driving teacher demand, and the resulting effects on the Georgia teaching force.

#### Student Enrollment Demand

##### Student Enrollment Counts

Table 2.1 shows Fall student enrollment counts by grade level from FY97 through FY01, with projections for FY02, FY06, and FY11. Approximately one-half of total Pre-K-12 enrollment is in the elementary grades (Pre-K-5), grades that tend to have lower teacher-student ratios. Georgia's Pre-K-12 enrollment has been growing at an average annual rate of 1.8% between FY97 and FY01.



Table 2.1. Student Enrollment Counts by Grade Level, Fy97-FY11

Grade Level	FY97	FY98	FY99	FY00	FY01	FY02	FY06	FY11
<b>Pre-K</b>	<b>25,522</b>	<b>29,357</b>	<b>30,779</b>	<b>31,362</b>	<b>32,248</b>	<b>33,246</b>	<b>39,542</b>	<b>52,406</b>
Kindergarten	112,385	111,081	112,287	110,375	110,960	117,694	137,278	180,308
Grade 1	114,978	115,462	114,855	115,614	114,049	114,270	134,935	175,207
Grade 2	110,641	114,559	114,454	113,966	114,939	113,268	128,285	164,403
Grade 3	107,050	111,495	115,495	115,478	115,691	116,281	125,548	157,418
Grade 4	105,333	108,023	112,226	116,529	116,678	116,954	123,111	150,956
Grade 5	104,059	106,114	109,053	113,362	117,973	117,876	117,257	145,070
<b>Elem. Total (K-5)</b>	<b>654,446</b>	<b>666,734</b>	<b>678,370</b>	<b>685,324</b>	<b>690,290</b>	<b>696,343</b>	<b>766,414</b>	<b>973,362</b>
Grade 6	104,926	106,131	108,517	111,616	116,072	120,502	119,540	141,431
Grade 7	103,601	105,222	106,857	109,144	112,249	116,650	121,908	136,062
Grade 8	102,355	103,107	104,863	106,696	109,124	106,973	115,588	125,437
<b>Middle Total</b>	<b>310,882</b>	<b>314,460</b>	<b>320,237</b>	<b>327,456</b>	<b>337,445</b>	<b>344,125</b>	<b>357,036</b>	<b>402,930</b>
Grade 9	119,617	121,511	123,055	125,420	126,793	129,994	137,369	144,942
Grade 10	92,630	94,881	95,755	98,035	99,934	100,653	109,140	108,477
Grade 11	78,137	79,682	81,968	82,986	85,910	87,090	91,616	94,353
Grade 12	65,527	69,355	71,127	72,358	72,317	74,865	76,826	83,437
<b>Grade 9-12</b>	<b>355,911</b>	<b>365,429</b>	<b>371,905</b>	<b>378,799</b>	<b>384,954</b>	<b>392,602</b>	<b>414,951</b>	<b>431,209</b>
<b>Total Enrollment</b>	<b>1,346,761</b>	<b>1,375,980</b>	<b>1,401,291</b>	<b>1,422,941</b>	<b>1,444,937</b>	<b>1,466,316</b>	<b>1,577,943</b>	<b>1,859,907</b>

### ***Student Enrollment Ethnicity Profile and Demand Implications***

The 2000 Census and student enrollment data from the Georgia Department of Education reveal a changing ethnic distribution among Georgia's students. Hispanic student percentages have grown rapidly during the past three years (FY99-01). Approximately 12,000 new Hispanic students were added to school rosters during FY01 alone. This additional number of students not only affects teacher demand, but also significantly impacts the type of teachers needed. For example, many Hispanic students often require ESOL services. This will necessitate additions to the numbers of ESOL teachers.

### ***Student Enrollment by RESA***

As would be expected, the Metro RESA has the highest concentration of students (about 36% of all students in FY01), with First District RESA a distant second (8.4%). Oconee (1.4%), Heart of Georgia (1.6%), and Okefenokee (1.9%) RESAs have the fewest number of students, as shown in the following table (Table 2.2). Teacher demand in RESAs is distributed in proportion to student enrollment. Between FY97 and FY01, Pioneer RESA had the highest average annual enrollment growth rate of 4.5%, followed by Griffin RESA (4.0%), and Northwest RESA (3.3%). The following five RESAs experienced some decline between FY97 and FY01: Central Savannah, Chattahoochee, Heart of Georgia, Oconee, and Southwest Georgia.

Table 2.2. Student Enrollment by RESA, FY97-FY01

RESA	FY97	FY98	FY99	FY00	FY01	FY97-01 Average Annual Growth Rate
Central Savannah	80,390	80,670	80,252	79,794	78,836	-0.5%
Chattahoochee	57,665	57,633	57,577	57,047	56,496	-0.5%
Coastal Plains	41,888	42,559	42,296	42,330	42,184	0.2%
First District	119,647	121,612	122,249	121,657	121,328	0.4%
Griffin	67,942	71,147	73,666	75,837	78,781	4.0%
Heart of Georgia	23,903	23,851	23,700	23,593	23,544	-0.4%
Metro	466,614	480,196	494,823	507,770	518,748	2.8%
Middle Georgia	61,425	61,948	62,559	62,745	62,876	0.6%
North Georgia	55,682	57,002	57,832	58,933	60,461	2.1%
Northeast Georgia	85,849	88,460	90,425	92,425	95,403	2.8%
Northwest Georgia	53,406	54,966	56,797	58,428	60,551	3.3%
Oconee	19,847	20,094	19,978	19,997	19,732	-0.1%
Okefenokee	27,446	27,617	27,466	27,383	27,460	0.0%
Pioneer	64,539	67,481	70,349	73,364	76,227	4.5%
Southwest Georgia	69,788	69,372	68,836	68,123	67,532	-0.8%
West Georgia	50,730	51,372	52,486	53,515	54,778	2.0%
<b>Statewide Totals</b>	<b>1,346,761</b>	<b>1,375,980</b>	<b>1,401,291</b>	<b>1,422,941</b>	<b>1,444,937</b>	<b>1.8%</b>

### **Reasons for the Growth in Student Enrollment**

Georgia's student enrollment has continued to grow at a time when enrollment is declining in many parts of the nation. The growth in student enrollment mirrors the population growth that Georgia has experienced in recent years, and that is documented in the 2000 Census. This population growth is largely due to the growth in families that relocate to Georgia and to consistent increases in the number of live births in Georgia since 1997.

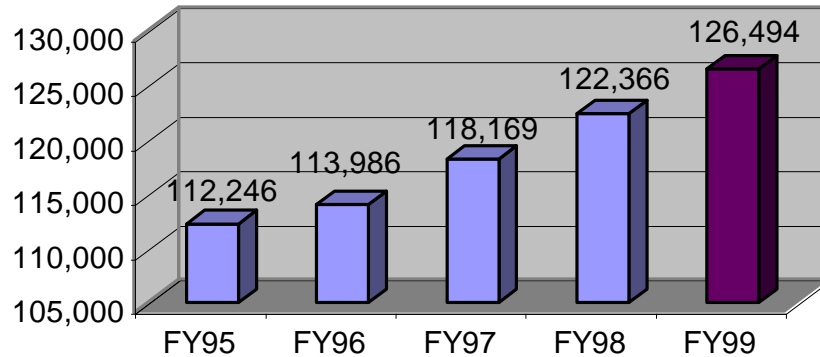
#### ***Population Migration***

Population migration patterns affect student enrollment and, in turn, can affect the demand for teachers. From 1990 to 1999, Georgia had a net population increase of 796,511 due to migration. This migration consisted of military, as well as, civilian families (Source: Appalachian Regional Commission, September 2001; <http://arc.gov/research.pop/popga.htm>). Using the national birth rate estimate of 14.3 births annually for every 1,000 people in the population (Source: 1999 CIA World Factbook, [http://www.photius.com/wfb\\_1999/rankings/birth\\_rate\\_1.html](http://www.photius.com/wfb_1999/rankings/birth_rate_1.html)), about 1,100 new children are added to Georgia's population yearly in families who recently relocated into the state. Census data show that families moving into Georgia already bring some school age children, further increasing the public school enrollment.

## Live Births

Figure 2.1 shows Georgia live birth counts from FY95 to FY99, as reported by the Georgia Department of Human Resources.

Figure 2.1. Georgia Live Birth Counts FY95 - FY99



In FY97, Georgia's birth count jumped unexpectedly by 4,000 children over FY96 count. The unusual increase in FY97 live births, and a projected impact on Georgia's teaching force and classrooms, was put forth in the Status Report-2000. Continuing live birth data now indicate that the FY97 increase was not a statistical oddity. Similar increases occurred in FY98 and again in FY99. The children born in FY97 are four years old in FY01. They will start to impact enrollment in Pre-K classes in FY02 and Kindergarten class enrollment in FY02 and FY03. Similar live birth increases in FY98 and FY99 will impact enrollment in Kindergarten starting from FY03 and FY04, respectively.

As these children reach school age and progress from Kindergarten through primary grades 1-3, if they remain in Georgia, the state will need more teachers to accommodate them. In addition to the teachers needed to meet regular Kindergarten through grade three (K-3) demand, 4,000 additional students will necessitate the hiring of 235 more teachers for every grade level through which these students progress.

In other words, if all other student enrollment and teacher projections remain unchanged, these additional students will require 235 teachers who, at current teacher-pupil ratios, will add an annual cost of approximately \$8 million per grade level, beginning with the FY02 kindergarten year.

This expected annual enrollment increase is a signal that teacher costs cannot, at least for the next five years, continue to be calculated using the average student enrollment growth rates of previous years. The increased teacher cost projection is based on an expected distribution of bachelor's and master's degree teachers and the FY02 state salary schedule for teachers who have three years of experience. The calculation assumes an average teacher salary of \$30,000 and teacher-pupil ratios of 1:17 in kindergarten, 1:23 in grades 1-3, and 1:25 in grade 4.

Moreover, the initial \$8 million for 235 additional teachers will grow cumulatively from year-to-year as these students progress to higher grade levels, thus requiring 235 additional teachers at each successive grade level. Therefore:

- \$ An FY02 increase in needed Kindergarten teachers costs \$ 8 million
- \$ An FY03 increase in Kindergarten and first grade teachers costs \$13.22 million
- \$ An FY04 increase in K-2 teachers costs \$18.44 million
- \$ An FY05 increase in K-3 teachers costs \$23.66 million
- \$ An FY06 increase in K-4 teachers costs \$28.46 million\*

\*NOTE: The increased number of students, per the live birth indicators, is included in teacher demand projections found later in this chapter.

Projections beyond FY06 are not presented in the Status Report-2001, since live birth rates are currently available only through 1999, and the long-term continuation of such an increase in live birth growth rates cannot be adequately predicted. However, the increase in Georgia's birth rate foreshadows the expectation for the nation as a whole, where "enrollment in grade 1 is expected to decrease through 2002, then increase slightly through 2011" (Source: NCES – Projection of Education Statistics to 2011).

### ***Student Enrollment Projections***

The grade level projections for student enrollment in Table 2.1 are based on 10 years of enrollment statistics provided by the Georgia Department of Education and the average progression rate from one grade to another. To correctly establish teacher demand expectations at each grade level, it is important to understand the patterns by which students continue in Georgia public schools from one year to the next. For example, not all Georgia students in public school grade 10 traditionally continue into public school grade 11; and more students typically enroll in public school grade 9 than were in public school grade 8 the prior year.

A "student enrollment continuation ratio" is the rate at which students progress from grade to grade from one year to the next. To project how many students will be in Georgia school systems each year from FY02 to FY11, average continuation ratios from one grade level to the next, and from each year to the next, were determined. The averages were based on a rich history of enrollment data and patterns from FY92 through FY01. For example, the average ratio of first grade student enrollment to the number of prior year Kindergarten students provides an average continuation ratio of 1.02983, or an average increase of about 3%. The grade-to-grade average continuation ratios are presented in Table 2.3.

Table 2.3. Student Enrollment Continuation Ratios

Grade	Continuation Ratio (From Previous Grade)
Grade 1	1.02983
Grade 2	0.99315
Grade 3	1.011678
Grade 4	1.010919
Grade 5	1.010265
Grade 6	1.021436
Grade 7	1.004978
Grade 8	0.953
Grade 9	1.191254
Grade 10	0.79384
Grade 11	0.87148
Grade 12	0.87144

To understand the data contained in this table, consider the following example. In FY01, as shown in Table 2.1, 109,124 eighth graders were reported in Georgia public schools. The continuation factor into grade 9 is 1.191254 (or 19.1254% more students in the ninth grade than were reported in the previous year's eighth grade roster). Therefore, 109,124 (FY01 eighth grade students x 1.191254 (continuation student rate) = a predicted 129,994 ninth grades in FY02. The following table (Table 2.4) portrays the statewide average student enrollment continuation ratios by RESA.

The highest variability in continuation rates among RESAs occurs in the continuation rates into grade 9, where the rates vary from 1.093 for North Georgia to 1.275 for Central Savannah RESA. Additionally, grade 9 continuation ratios are generally higher than rates into other grades. The high continuation rate into grade 9 may be due to transfers from private schools to public schools after grade 8. Whatever the reason for the high grade 9 yield rates, the effect is negated by the drop in continuation rates into grade 10, likely associated with the beginning of drop-out patterns for high school students.

Table 2.4. Student Enrollment Continuation Ratios by RESA

Average Continuation Ratios by RESA	to Gr. 1	to Gr. 2	to Gr. 3	to Gr. 4	to Gr. 5	to Gr. 6	to Gr. 7	to Gr. 8	to Gr. 9	to Gr. 10	to Gr. 11	to Gr. 12
Chattahoochee	1.011	0.969	0.989	0.997	0.996	1.007	1.014	0.954	1.242	0.775	0.844	0.869
Central Savannah	1.025	0.978	1.001	0.999	1.001	1.028	0.989	0.963	1.275	0.733	0.882	0.882
Coastal Plains	1.013	0.976	1.000	0.994	0.995	1.030	0.998	0.984	1.136	0.786	0.834	0.896
First District	1.019	0.980	0.998	1.001	0.994	1.025	0.992	0.970	1.231	0.743	0.841	0.873
Griffin	1.082	1.018	1.038	1.039	1.038	1.055	1.024	1.032	1.213	0.822	0.857	0.889
Heart of Georgia	1.013	0.949	0.994	1.01	0.999	1.034	1	0.976	1.18	0.787	0.881	0.904
Metro RESA	1.044	1.011	1.018	1.017	1.016	1.01	1.003	1.023	1.161	0.835	0.897	0.932
Middle Georgia	1.014	0.995	1.004	1.004	1.004	1.013	0.993	0.963	1.257	0.724	0.892	0.843
Northeast Georgia	1.009	0.993	1.028	0.992	1.009	1.032	1.014	0.997	1.193	0.774	0.835	0.897
Northwest Georgia	1.045	0.978	1.011	1.014	1.016	1.025	1.018	0.997	1.145	0.798	0.839	0.867
North Georgia	1.013	1.003	1.021	1.020	1.017	1.025	1.018	1.010	1.093	0.867	0.912	0.811
Oconee	1.027	0.959	0.979	1.002	0.999	0.990	0.975	0.969	1.262	0.709	0.853	0.911
Okefenokee	1.018	0.968	0.998	1.013	0.996	1.033	0.991	0.982	1.105	0.837	0.832	0.881
Southwest Georgia	1.000	0.965	0.993	1.000	0.981	1.047	0.972	0.966	1.213	0.733	0.847	0.891
West Georgia	1.086	1.042	1.068	1.066	1.076	1.082	1.065	1.056	1.201	0.894	0.888	0.912

## Policy Change in Class Size

Policy changes that are implemented to increase student achievement often impact teacher-pupil ratios (TPR), and therefore, the demand for teachers in programs, fields, and/or grade levels to which the improvements are targeted. The class size (Georgia State Board of Education Rule 160-5-1-.08) is one such policy. This rule phases in a lower maximum class size from FY02 to FY04. It also stipulates the funding class size. Reduction in class size, even with a stagnant student enrollment, implies increased demand for teachers. The combined effect of these policy changes and an increasing student enrollment is discussed next.

### **Teacher Demand Based on Student Enrollment and Reduced Class Size**

Table 2.5 presents the resultant effect of increasing student enrollment and reduced class size on the number of teachers needed by grade level in Georgia for FY02, FY06, and FY11.

According to state Board of Education Rule 160-5-1-.08 Class Size, the **Individual Class Size Funding Ratio** is the number of students needed to earn state funds, calculated on the base amount, to pay for a single class in each of the QBE formula programs. In other words, the individual class size funding ratio (hereafter referred to as “funding class size”) is the base number of students to one teacher who is employed by the state of Georgia. The number of students to one teacher can be expanded in individual class segments, according to the state Board of Education rule [160-5-1-.8 Class Size]. This increased number of students to one teacher is called maximum individual class size. The **Maximum Individual Class Size** (hereafter referred to as “maximum class size”) is described in regulations by the state Board of Education [160-5-1-.08]. Class size regulations for Special Needs, Early Intervention, Gifted, Alternative, Instructional Extension, and English to Speakers of Other Languages programs are also specified in the state Board of Education rule [160-5-1-.08 Class Size]. Teacher-pupil ratios for general education class size are the basis for table 2.5.

Table 2.5. Projected Teacher Demand Based on Reduced Class Size and Projected Enrollment, FY02-FY11

Grade Level	Projected FTE Student Enrollments			Funding Class Size	Max Class Size FY02	Max Class Size FY04-FY11	Teachers Funded	Teachers Based on Max Class Size	Teachers Funded	Teachers Based on Max Class Size	Teachers Funded	Teachers Based on Max Class Size
	FY02	FY06	FY11									
										FY02	FY06	FY11
<b>Pre-K</b>	<b>33246</b>	<b>39542</b>	<b>52406</b>	10	10	10	<b>3324.6</b>	<b>3324.6</b>	<b>3954.2</b>	<b>3954.2</b>	<b>5240.6</b>	<b>5240.6</b>
<b>Kindergarten</b>	<b>117694</b>	<b>137278</b>	<b>180308</b>	15	20	18	<b>7846.3</b>	<b>5884.7</b>	<b>9151.9</b>	<b>7626.6</b>	<b>12020.5</b>	<b>10017.1</b>
Grade 1	114270	134935	175207	17	23	21	6721.8	4968.3	7937.4	6425.5	10306.3	8343.2
Grade 2	113268	128285	164403	17	23	21	6662.8	4924.7	7546.2	6108.8	9670.8	7828.7
Grade 3	116281	125548	157418	17	23	21	6840.1	5055.7	7385.2	5978.5	9259.9	7496.1
Grade 4	116954	123111	150956	23	31	28	5085.0	3772.7	5352.7	4396.8	6563.3	5391.3
Grade 5	117876	117257	145070	23	31	28	5125.0	3802.5	5098.1	4187.8	6307.4	5181.1
<b>Elem. Total</b>	<b>696343</b>	<b>766414</b>	<b>973362</b>				<b>38281</b>	<b>28408.6</b>	<b>42471.5</b>	<b>34724</b>	<b>54128.2</b>	<b>44257.5</b>
Grade 6	120502	119540	141431	23	31	28	5239.2	3887.2	5197.4	4269.3	6149.2	5051.1
Grade 7	116650	121908	136062	23	31	28	5071.7	3762.9	5300.3	4353.9	5915.7	4859.4
Grade 8	106973	115588	125437	23	31	28	4651.0	3450.7	5025.6	4128.1	5453.8	4479.9
<b>Middle Total</b>	<b>344125</b>	<b>357036</b>	<b>402930</b>	23	31	28	<b>14961.9</b>	<b>11100.8</b>	<b>15523.3</b>	<b>12751.3</b>	<b>17518.7</b>	<b>14390.4</b>
Grade 9	129994	137369	144942	23	32	28	5651.9	4062.3	5972.6	4906	6301.8	5176.5
Grade 10	100653	109140	108477	23	32	28	4376.2	3145.4	4745.2	3897.9	4716.4	3874.2
Grade 11	87090	91616	94353	23	32	28	3786.5	2721.6	3983.3	3272	4102.3	3369.8
Grade 12	74865	76826	83437	23	32	28	3255.0	2339.5	3340.3	2743.8	3627.7	2979.9
<b>9-12 Total</b>	<b>392602</b>	<b>414951</b>	<b>431209</b>	23	32	28	<b>17069.6</b>	<b>12268.8</b>	<b>18041.4</b>	<b>14819.7</b>	<b>18748.2</b>	<b>15400.4</b>
				<b>Total Enrollment-Teacher Ratios</b>								
Special Ed. (P-12)				128.5573			11405.9	11405.9	12274.2	12274.2	14467.5	14467.5
EIP (Ratio to K-2)				114.3032			1320.5	1320.5	1546.9	1546.9	2035.9	2035.9
Other Elem. (Ratio to K-5)				137.7406			5055.5	5055.5	5564.2	5564.2	7066.6	7066.6
Other Middle (Ratio to 6-8)				53.68348			6410.3	6410.3	6650.8	6650.8	7505.7	7505.7
Instructional Specialists (P-12)				299.4542			4896.6	4896.6	5269.4	5269.4	6211	6211
Other Teachers				2571.269			570.3	570.3	613.7	613.7	723.3	723.3
Vocational Ed Teachers (P-12)				213.35			2888.3	2888.3	3058.1	3058.1	3246.8	3246.8
<b>Total</b>	<b>1466316</b>	<b>1577943</b>	<b>1859907</b>				<b>106184.5</b>	<b>87650.2</b>	<b>114967.7</b>	<b>101226.5</b>	<b>136892.5</b>	<b>120545.7</b>
<b>Midpoint Demand Projections</b>							<b>96,918</b>		<b>108,098</b>		<b>128,720</b>	

For the purpose of this report, funding class size and maximum class size teacher-pupil ratios (as prescribed in state Board of Education rule 160-5-1-.08) provide the basis for these computations. A significant difference is found in the number of teachers needed at each grade level in FY02, FY06, and FY11 when based on either maximum class size projections or funding class size projections. A midpoint of demand has been calculated for FY02, FY06, and FY11. It is expected that the actual employment counts for these teaching categories will

be somewhere near the midpoint of the two extremes presented for each year. Specifically, a total of about 96,918 FTE teachers will be needed in FY02, 108,098 in FY06, and 128,720 in FY11. It should be noted that these midpoints are quite close to the predictions based on regression analysis using purely historical data as shown in Table 2.6.

Table 2.6. Teacher Demand Model, 2001\*

Year	Projected Teaching Positions	Actual Teaching Positions	Projected Teacher Attrition	Actual Teacher Attrition	Projected Growth in Teaching Positions	Actual Growth in Teaching Positions	Projected Teachers Required	Actual Teachers Hired
1986	59,662	<b>60,666</b>	6,237	<b>6,672</b>	1,353		7,510	
1987	61,405	<b>60,423</b>	5,806	<b>5,058</b>	1,466	<b>-243</b>	7,298	<b>6,416</b>
1988	63,230	<b>62,825</b>	5,465	<b>5,459</b>	1,579	<b>2,402</b>	7,146	<b>7,468</b>
1989	65,138	<b>64,967</b>	5,214	<b>5,546</b>	1,692	<b>2,142</b>	7,055	<b>7,591</b>
1990	67,128	<b>67,394</b>	5,053	<b>5,218</b>	1,805	<b>2,427</b>	7,026	<b>7,973</b>
1991	69,200	<b>69,467</b>	4,981	<b>5,031</b>	1,918	<b>2,073</b>	7,057	<b>7,169</b>
1992	71,354	<b>70,945</b>	4,999	<b>4,727</b>	2,031	<b>1,478</b>	7,149	<b>6,352</b>
1993	73,590	<b>73,591</b>	5,107	<b>4,853</b>	2,144	<b>2,646</b>	7,302	<b>7,222</b>
1994	75,909	<b>76,047</b>	5,304	<b>5,288</b>	2,257	<b>2,456</b>	7,516	<b>7,198</b>
1995	78,309	<b>78,815</b>	5,592	<b>5,543</b>	2,369	<b>2,768</b>	7,791	<b>7,912</b>
1996	80,792	<b>81,354</b>	5,969	<b>7,470</b>	2,482	<b>2,539</b>	8,126	<b>7,951</b>
1997	83,358	<b>82,338</b>	6,436	<b>5,233</b>	2,595	<b>984</b>	8,523	<b>8,454</b>
1998	86,005	<b>86,262</b>	6,993	<b>7,012</b>	2,708	<b>3,924</b>	8,981	<b>9,158</b>
1999	88,735	<b>88,757</b>	7,639	<b>7,466</b>	2,821	<b>2,495</b>	9,499	<b>9,507</b>
2000	91,546	<b>91,467</b>	8,375	<b>8,595</b>	2,934	<b>2,710</b>	10,079	<b>10,176</b>
2001	94,440	<b>94,689</b>	9,201		3,047	<b>3,222</b>	10,719	<b>11,817</b>
2002	97,417		10,117		3,160		11,421	
2003	100,475		11,123		3,272		12,183	
2004	103,616		12,218		3,385		13,006	
2005	106,839		13,403		3,498		13,891	
2006	110,144		14,678		3,611		14,836	
2007	113,531		16,042		3,724		15,842	
2008	117,000		17,497		3,837		16,909	
2009	120,552		19,041		3,950		18,037	
2010	124,186		20,675		4,063		19,225	
2011	127,902		22,399		4,175		20,475	

\*Based on Regression only

### Teacher Demand by Subject

Presented in Table 2.7 are the projections for teacher need in the four subject areas of English, Mathematics, Science, and Social Science. These are conservative estimates because further reductions in class size in selected high school subjects from FY02 through FY04 may lead to the need for more teachers in those subjects.

The tabulations for middle grades reveal staffing differences, likely based on curriculum differences, in the proportions of teachers in the core areas. English has more subject-prepared teachers than the other areas, and Science has the lowest number. At the high



school level, English also has the most teachers followed by Mathematics, and then Social Studies and Science.

Do these differences reflect relative importance attached to these subject areas or the difficulty in hiring teachers into these areas? The class size rules require an even further reduction in class size in Science. This will mean an increased need for Science teachers.

Table 2.7. Teacher FTE Counts and Projected Demand by Subject, FY97-FY11

<b>Subject</b>	<b>FTE Counts by Year from the CPI Files</b>					<b>Projections</b>		
<b>English</b>	<b>FY97</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01</b>	<b>FY02</b>	<b>FY06</b>	<b>FY11</b>
Pre-K-5	276.4	290.0	290.2	256.3	413.72	<b>417.8</b>	<b>461.5</b>	<b>587.3</b>
Middle Grades	2036.2	2157.5	2236.7	2316.1	2795.8	<b>2851.1</b>	<b>2958.1</b>	<b>3338.4</b>
High School	2818.9	3219.5	3342.7	3363.2	3356.29	<b>3423</b>	<b>3617.8</b>	<b>3759.6</b>
Other	51.8	33.6	33.3	45.4	72.22	<b>73.3</b>	<b>78.9</b>	<b>93</b>
<b>Total</b>	<b>5183.3</b>	<b>5700.7</b>	<b>5903.0</b>	<b>5980.9</b>	<b>6638.03</b>	<b>6765.2</b>	<b>7116.3</b>	<b>7778.3</b>
<b>Math</b>								
Pre-K-5	147.0	158.5	149.5	132.1	180.24	<b>182</b>	<b>201</b>	<b>255.9</b>
Middle Grades	1518.6	1570.9	1649.0	1679.3	1972.01	<b>2011</b>	<b>2086.5</b>	<b>2354.7</b>
High School	2510.3	2787.1	2910.4	2956.1	3027.94	<b>3088.1</b>	<b>3263.9</b>	<b>3391.8</b>
Other	27.5	30.7	28.2	40.7	32.94	<b>33.4</b>	<b>36</b>	<b>42.4</b>
<b>Total</b>	<b>4203.4</b>	<b>4547.2</b>	<b>4737.1</b>	<b>4808.3</b>	<b>5213.13</b>	<b>5314.5</b>	<b>5587.4</b>	<b>6044.8</b>
<b>Science</b>								
Pre-K-5	28.6	32.1	31.7	19.2	49.61	<b>50.1</b>	<b>55.3</b>	<b>70.4</b>
Middle Grades	1134.6	1212.6	1268.1	1328.8	1583.95	<b>1615.3</b>	<b>1675.9</b>	<b>1891.3</b>
High School	2131.3	2593.0	2674.4	2659.9	2740.9	<b>2795.4</b>	<b>2954.5</b>	<b>3070.2</b>
Other	31.5	25.8	18.4	21.9	26.03	<b>26.4</b>	<b>28.4</b>	<b>33.5</b>
<b>Total</b>	<b>3326.0</b>	<b>3863.4</b>	<b>3992.6</b>	<b>4029.8</b>	<b>4400.19</b>	<b>4487.2</b>	<b>4714.1</b>	<b>5065.4</b>
<b>Social Science</b>								
Pre-K-5	28.09	23.63	23.92	21.36	45.60	<b>46</b>	<b>50.9</b>	<b>64.7</b>
Middle Grades	1368.40	1436.72	1493.34	1541.42	1678.61	<b>1711.8</b>	<b>1776.1</b>	<b>2004.4</b>
High School	2275.14	2601.00	2673.66	2729.34	2798.03	<b>2853.6</b>	<b>3016.1</b>	<b>3134.2</b>
Other	28.99	28.11	34.36	40.13	43.54	<b>44.2</b>	<b>47.5</b>	<b>56</b>
<b>Total</b>	<b>3700.6</b>	<b>4089.5</b>	<b>4225.3</b>	<b>4332.3</b>	<b>4565.78</b>	<b>4655.6</b>	<b>4890.6</b>	<b>5259.3</b>

## Attrition

### Attrition in Georgia and the United States

Fully tabulating and predicting teacher attrition with precision is important when informing stakeholders about future teacher demand. A substantial amount of the Status Report-2001 is devoted to the subject of teacher attrition because it is the factor that directly impacts the number of additional teachers to be hired from year to year.

According to the National Center for Education Statistics (*The Condition of Education 1997, Indicator 58*), teacher attrition is the largest single factor determining the demand for

additional teachers in the Nation's schools. Georgia is similar to the rest of the nation in its attrition statistics. "First year teachers are 2.5 times more likely to leave the profession than their more experienced counterparts. An additional 15% of beginning teachers will leave after the second year, and another 10% will leave after the third year. The turnover rate of new teachers does not settle at the overall rate of 6% until the fifth or sixth year. Of all beginning teachers who enter the profession, 40-50% will leave during the first seven years of their career, and in excess of two-thirds of those who leave will do so in the first four years of teaching" (Source: Teacher Attrition: Is Time Running Out, J. Croasmun, D. Hampton, S. Herrmann, The University of North Carolina at Chapel Hill).

### **The Attrition Cycle: An Overview**

In fall 2001 (FY02), 5,000 Georgia teachers began their first teaching assignments. One-third of this group, or 1,500, will not appear in Georgia educator employment records by fall 2005 (FY06). An estimated 750 of the new teachers will teach only one year. Another 450 will seek and attain employment outside of education by September 2004 (FY05), and 300 more will leave teaching by the end of their fifth year experience (FY06). A residual 3,500 teachers from the fall 2001 new teacher group will remain in Georgia classrooms as five-year veterans who are quite likely to stay in teaching as a life-long career.

A number of the new FY02 teachers will have been thoroughly prepared in a variety of training programs, while others will receive their best training during the first month in the classroom. Most new teachers will receive an annual salary just over \$30,000 and are expected to immediately achieve at a high level in the complex and often stressful job of appropriately maximizing all students' potential and learning. Many new teachers will be assigned to hard-to-staff schools, content areas, and/or classrooms settings in which attaining high levels of achievement in a diverse population of students is challenging for even a practiced and successful teacher.

Most of the new teachers' time will be spent alone in the classroom all day with at least 18-25 students in grades K-5, and as many as 150 students during class segments in the middle and high school workday. Classroom and school diversity will include learning, cultural, ethnic, economic, religious, physical, and medical differences among the students, the community, and the faculty itself. Many students will present a variety of documented "special needs" or exceptionalities that deserve specific attention, teaching strategies, and time.

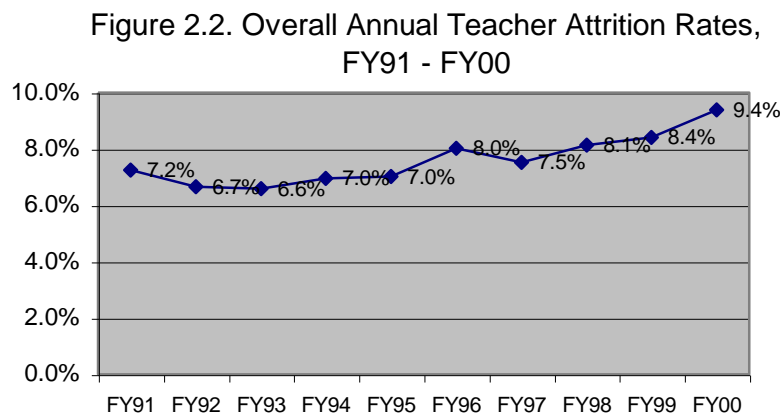
A portion of the remaining 3,500 teachers will occasionally stop out, or leave teaching in Georgia, to return at a later time to a Georgia classroom. These teachers stop out due to family reasons or to enhance their own education levels. This type of temporary attrition produces a hiring demand, for replacement teachers must be recruited to fill the empty classrooms. Some of the career teachers may stay out of teaching for long periods and for a variety of reasons. When they return to the workforce as "newly hired" teachers, they constitute one of the largest components of the annual new teacher supply.

After several years of service and educational advancement, some of these teachers will be promoted out of the classroom into other administrative positions. If they are promoted out of the classroom, replacement teachers must be found. Furthermore, after 30 years of Georgia teaching or other educator experience, these career educators, who first began teaching in

fall 2001, will likely retire from teaching, making an attrition choice that is typically a permanent career decision. Both of these scenarios lead to teacher attrition.

### **Teachers that Leave**

From the FY00 Georgia teacher force, 8,595 teachers did not return to teaching in FY01. This amounted to a statewide attrition rate of 9.4%. This is Georgia's highest attrition rate in ten years (see Figure 2.2).



### **Attrition Due to Promotions and Reassignments**

Promotions and non-teaching reassignments of teachers from the classroom create vacancies and demand for classroom teachers. Between FY00 and FY01, Georgia's school systems reported 1,193 promotions or reassignments of teachers to non-teaching educator jobs. Over 20% of the promotions and/or reassignments were among high school teachers leaving the classroom to accept administrative positions of various types, most often assistant principal appointments. The next highest percentage of reassignment or promotion (16%) was among special education teachers, again, to take assistant principal appointments.

The percentage of teacher attrition accounted for by promotions has been on a decline from 17.3% in FY98 to 13.9% in FY00. While promotions into administrative positions are a natural and logical career progression for teachers, the impact on classroom demand and teacher supply attrition is substantial and difficult to plan for over a long projection span. In addition, a significant number of promotions and reassignments create migration across schools and systems intensifying attrition in some systems more than others.

### **Teacher Mobility and Intersystem Relocations**

Teachers routinely leave a system where employed to take positions in another system. The annual result of this intersystem mobility is that approximately 4% of the state's teachers relocate to other systems within Georgia. The number of teacher relocations to other states is not known because the Employment Security Act prevents individual employment information from being sought or released to outside states by respective state Departments of Labor. During the period of FY00 to FY01, 3,809 teachers (or 4.2% of all FY00 teachers

employed in Georgia during the two-year span) moved from one Georgia school system to another Georgia system.

The in-state mobility of teachers shows a pattern of “trade balance” among systems in that South Georgia rural systems lead the state in net loss of teachers each year. In the following list of systems with high percentages of loss (Table 2.8), only Jackson County and Wilkes County lie north of Interstate 20.

Table 2.8. School Systems with High Rates of Attrition Due to Relocations

<b>System Name</b>	<b>Gains</b>	<b>Losses</b>	<b>Net Loss</b>	<b>System Total</b>	<b>Net Percent Of Total</b>
Webster County	0	7	-7	26	-26.9%
Talbot County	0	6	-6	54	-11.1%
Twiggs County	3	16	-13	130	-10.0%
Randolph County	3	15	-12	122	-9.8%
Warren County	3	10	-7	72	-9.7%
Peach County	8	35	-27	286	-9.4%
Hancock County	2	11	-9	104	-8.7%
Jefferson County	10	30	-20	236	-8.5%
Evans County	10	20	-10	131	-7.6%
Jackson County	12	34	-22	327	-6.7%
Echols County	1	4	-3	45	-6.7%
Dooly County	3	11	-8	121	-6.6%
McIntosh County	6	15	-9	137	-6.6%
Wilkes County	4	13	-9	139	-6.5%
Screven County	2	12	-10	208	-4.8%
Burke County	5	19	-14	300	-4.7%
Tattnall County	8	19	-11	236	-4.7%
Lanier County	5	9	-4	90	-4.4%
Sumter County	14	29	-15	369	-4.1%

The mobility percentages among larger school systems are smaller, although the numbers are higher. Table 2.9 is ordered from higher to lower percentages, based on the attrition count each system experienced because of intersystem mobility from FY00 to FY01.

Table 2.9. Attrition Among Larger School Systems

System Name	Gains	Losses	Net Change	System Total	Net Percent Of Total
DeKalb County	142	273	-131	5,849	-2.2%
Fulton County	140	189	-49	4,328	-1.1%
Clayton County	87	184	-97	2,854	-3.4%
Cobb County	242	168	74	5,997	1.2%
Gwinnett County	331	156	175	6,776	2.6%
Atlanta City	99	120	-21	3,823	-0.5%
Bibb County	35	70	-35	1,586	-2.2%
Chatham County	45	61	-16	2,292	-0.7%
Paulding County	68	61	7	974	0.7%
Rockdale County	44	59	-15	851	-1.8%
Henry County	117	57	60	1,277	4.7%
Clarke County	37	55	-18	828	-2.2%
Richmond County	52	55	-3	2,212	-0.1%
Spalding County	42	49	-7	668	-1.0%
Douglas County	25	48	-23	1,153	-2.0%
Bartow County	44	48	-4	750	-0.5%
Dougherty County	39	46	-7	1,130	-0.6%

Lastly, multi-year data comparisons of high-performing and low-performing schools revealed that the teacher mobility rate has been consistently greater for low-performing than for high performing schools (see Table 2.10). This fact suggests that system-to-system relocation is motivated by other factors in addition to normal residence relocation patterns.

Table 2.10. Low- and High-Performing Schools' Teacher Turnover Comparisons

Year	Retention		Attrition		Intra-system		Intersystem		Total Turnover	
	High	Low	High	Low	High	Low	High	Low	High	Low
FY90	81.45	80.40	10.73	10.87	6.73	5.84	1.09	2.89	18.55	19.60
FY91	79.68	87.42	8.48	5.55	10.42	4.71	1.41	2.32	20.31	12.58
FY92	89.62	84.47	6.23	7.14	2.72	6.64	1.44	1.75	10.39	15.53
FY93	91.28	85.73	4.21	6.36	3.74	5.31	0.78	2.59	8.73	14.26
FY94	92.96	86.7	4.17	5.91	2.16	5.05	.72	2.35	7.05	13.31
FY95	87.04	87.51	6.54	6.39	5.53	4.09	.88	2.01	12.95	12.49
FY96	88.76	84.66	8.17	10.58	2.55	2.86	.51	1.9	11.23	15.34
FY97	84.44	83.5	5.43	7.99	9.05	7.21	1.09	1.31	15.57	16.51
FY98	87.27	84.09	7.12	6.4	4.03	6.29	1.59	3.22	12.74	15.91
FY99	82.87	81.4	8.61	8.35	6.37	6.1	2.15	4.15	17.13	18.60
FY00	85.42	80.61	8.87	8.01	4.18	7.59	1.53	3.79	14.58	19.39
FY01	81.81	76.31	10.10	8.87	5.69	9.91	2.4	4.92	18.19	23.70

**Attrition Due to Retirement**

Table 2.11 shows FY98-FY00 retirees by teaching category. Note that retirement counts and rates have grown over the past three years. As described in Chapter 1, this increasing retirement trend will likely continue over the next five years due to the number of teachers over 50 years of age.

Table 2.11. Retirement Attrition Summary by Teaching Category, FY98 – FY00

2000	Total Teachers		Retirees		Retirement Rate
	#	% of Total	#	% of Total	
Pre-Kindergarten	1,331	1.5	12	0.6	0.9
Kindergarten	5,578	6.1	99	4.9	1.8
Elementary	31,995	35.0	731	36.1	2.3
Middle	16,476	18.0	370	18.3	2.2
High School	16,737	18.3	450	22.2	2.7
Special Education	11,153	12.2	130	6.4	1.2
Vocational Education	2,902	3.2	124	6.1	4.3
Other Teachers	5,295	5.8	111	5.5	2.1
<b>Total</b>	<b>91,467</b>	<b>100</b>	<b>2027</b>	<b>100</b>	<b>2.2</b>
1999	Total Teachers		Retirees		Retirement Rate
	#	% of Total	#	% of Total	
Pre-Kindergarten	1,297	1.5	7	0.4	0.5
Kindergarten	5,490	6.2	83	4.7	1.5
Elementary	30,924	34.8	671	37.7	2.2
Middle	15,891	17.9	300	16.9	1.9
High School	16,404	18.5	398	22.4	2.4
Special Education	10,678	12.0	105	5.9	1
Vocational Education	2,831	3.2	110	6.2	3.9
Other Teachers	5,242	5.9	104	5.8	2
<b>Total</b>	<b>88,757</b>	<b>100</b>	<b>1778</b>	<b>100</b>	<b>2.0</b>
1998	Total Teachers		Retirees		Retirement Rate
	#	% of Total	#	% of Total	
Pre-K	1279	1.5	3	0.2	0.2
K	5368	6.2	54	3.6	1
Elementary	30021	34.8	571	37.9	1.9
Middle	15762	18.3	271	18.0	1.7
High School	15971	18.5	353	23.5	2.2
Special Ed	10206	11.8	88	5.8	0.9
Vocational Ed	2742	3.2	89	5.9	2.8
Other Teachers	4914	5.7	76	5.0	1.5
<b>Total</b>	<b>86,263</b>	<b>100</b>	<b>1505</b>	<b>100</b>	<b>1.7</b>

**Retirement Attrition Counts by Selected Job Categories**

To highlight the role retirement played in the attrition of teachers from the FY00 workforce, the following data in Table 2.12 were extracted from the FY98-00 retirement information presented in Table 2.11. The results show that attrition due to retirement impacted high schools much more severely than other Georgia teaching force segments.

Table 2.12. Retirement Proportions and Overall Workforce Category Proportions, FY00

<b>Job Category</b>	<b>FY00 Category Count</b>	<b>FY00 Category Proportion of Total Teacher Count (n=91,467)</b>	<b>FY00 Category Retirement Count</b>	<b>FY00 Category Proportion of Total Retirement Count (n=2,027)</b>
Pre-K-5	37,573	41.1%	842	41.5%
Middle Grades	16,476	18.0%	370	18.3%
High School	16,737	18.3%	450	22.2%
Special Education	11,153	12.2%	130	6.4%
Others	9,528	10.4%	235	11.5%

**Retirement Counts by RESA**

Table 2.13 shows attrition in each RESA caused by retirement during FY98 to FY00. Note that retirement counts actually dropped in West Georgia, Southwest, Pioneer, Northwest, Northeast, Metro, Griffin, and Coastal Plains RESAs. The slight to substantial drops in actual retirements may be an indication that teachers who had reached retirement years of experience in FY00 remained in teaching due to (a) slumping economic conditions, and/or (b) a suppressed market of other job or career opportunities that have been open to mid-or second career professionals during the last 10 years.

Table 2.13. Retirement Counts by RESA, FY98-FY00

<b>RESA</b>	<b>Retirement Attrition</b>		
	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>
Central Savannah	76	99	101
Chattahoochee	68	79	99
Coastal Plains	44	55	44
First District	137	149	154
Griffin	59	78	77
Heart of Georgia	41	38	40
Metro	600	585	597
Middle Georgia	59	93	101
North Georgia	45	62	68
Northeast Georgia	48	83	74
Northwest Georgia	93	127	120
Oconee	18	21	31
Okefenokee	29	33	33
Pioneer	59	104	100
Southwest Georgia	72	90	66
West Georgia	57	82	68

## Attrition of New Teachers

New teacher attrition is a focal point in the study of attrition for many reasons. Results from the first year of teaching provide information about how many new teachers will need to be replaced annually. Also, to an extent, new teacher attrition data provides some indication of the effectiveness of preparation and selection processes and mentor and programs that are designed to ready and retain teachers for the classroom.

Although new teacher attrition is described in detail in the Status Report-2001, and in national, regional, and other state workforce reports, the findings do not imply that attrition of new teachers should or will be totally eliminated. Some undetermined percentage of new teachers choose the wrong profession initially and quickly realize that teaching is not a suitable career for them. Minimizing that number of unsuitable new teachers in the wrong profession is partly the role of preparation institutions and partly the responsibility of hiring school systems. However, clearly selecting new teachers is a difficult task and one that is subject to error. With an acknowledgement that attrition is appropriate and inevitable for some new teachers, it is important to also recognize that the teaching profession loses considerable talent each year by not properly mentoring and developing bright new teachers with novice classroom experience. This finding is prevalent in Phase I of the Teacher Retention Study recently completed by the Division for Educator Workforce Research and Development in the PSC.

Table 2.14 shows attrition patterns for new teachers who have no prior Georgia experience. Note that 5,057 new teachers with no prior Georgia experience were identified on the CPI in FY00, and 15% did not return to the FY01 workforce in any role.

**Table 2.14. Attrition Summary for New Teachers with Zero Experience, FY89 – FY00**

Base Year	Base Count	1-Year Attrition		3-Year Attrition		5-Year Attrition	
		Comparison Year	1-Year Attrition Rate	Comparison Year	3-Year Attrition Rate	Comparison Year	5-Year Attrition Rate
FY89	3,786	FY90	17%	FY92	30%	FY94	35%
FY90	4,455	FY91	17%	FY93	29%	FY95	35%
FY91	4,080	FY92	16%	FY94	26%	FY96	34%
FY92	3,855	FY93	14%	FY95	25%	FY97	36%
FY93	4,636	FY94	12%	FY96	25%	FY98	33%
FY94	4,669	FY95	11%	FY97	27%	FY99	31%
FY95	5,139	FY96	11%	FY98	23%	FY00	30%
<b>FY96</b>	5,226	FY97	13%	FY99	21%	<b>FY01</b>	<b>30%</b>
FY97	4,313	FY98	11%	FY00	24%		
<b>FY98</b>	4515	FY99	11%	<b>FY01</b>	<b>24%</b>		
FY99	5286	FY00	11%				
<b>FY00</b>	5057	<b>FY01</b>	<b>15%</b>				



Furthermore, when comparing the three-year attrition between new teachers with provisional certificates and graduates of traditional teacher preparation programs, it can be seen that a greater percentage of new teacher hires with provisional certification left the workforce in FY01 (see Table 2.15). This percentage (37.0%) is even greater than the three-year attrition rate reported in Table 2.14.

Table 2.15. Comparison of Three-Year Attrition between Graduates of Traditional Teacher Preparation Programs and New Teachers with Provisional Certificates, FY98 to FY01

Source	# New Teachers, FY98	# Loss Due to Attrition, FY01	% Loss Due to Attrition, FY01
All Georgia Teacher Preparation Institutions	1,762	323	18.3%
Provisional Certificates	522	193	37.0%

Moreover, the attrition rate for new high school teachers from the FY00 workforce was 20%, a noticeably higher rate than for teachers in most other categories. This figure was exceeded only by the attrition rate for new teachers of students with behavior disorders (25%). The high attrition trend is evidenced for among all high school teachers, as depicted in the following table (Table 2.16).

Table 2.16. Attrition Summary by Job Category for All High School Teachers

Job Category	FY00 Total	Attrition Count	Attrition Rate
Pre-K-5	37,573	3,364	9%
Middle Grades	16,476	1,575	9.6%
High School	16,737	1,824	10.9%
Special Education	11,153	1,079	9.7%

Over 1,800 high school teachers exited their jobs after FY00. This number was slightly less than the number of overall teacher retirees. It should be noted that attrition of Georgia's high school teachers is lower than in the nation as a whole, where the number of high school teachers who leave the workforce annually to work outside education is greater than the number who retire (Source: *NCES, The Condition of Education 1997, Indicator 58*).

### **Attrition by Teaching Category**

The 8,595 teachers who exited classrooms in FY00 were distributed as shown in Table 2.17. Of all the major teaching categories, high school teachers exited at the greatest rate (10.9%).

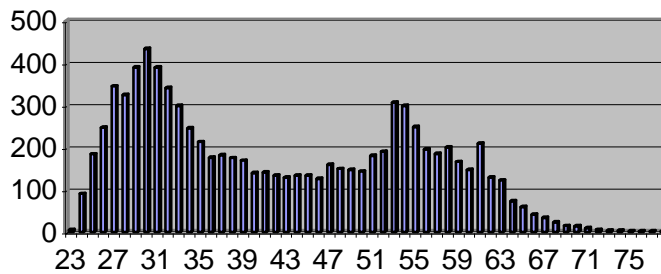
Table 2.17. Personnel Categories of Teachers Who Exited the Classroom, FY00

Personnel Categories	FY00 Totals	FY00 Attrition	Attrition Rate
Lottery Pre-School Teacher	1,331	92	6.9%
Kindergarten Teacher	5,578	384	6.9%
Grades K-5 Combination Teacher	4,085	492	12.0%
Grade 1 Teacher	5,984	476	8.0%
Grade 2 Teacher	5,555	522	9.4%
Grade 3 Teacher	5,404	489	9.0%
Grade 4 Teacher	4,921	397	8.1%
Grade 5 Teacher	4,715	512	10.9%
<b>Pre-K-5 Subtotal</b>	<b>37,573</b>	<b>3364</b>	<b>9.0%</b>
Grade 6 Teacher	3,606	319	8.8%
Grade 7 Teacher	3,415	333	9.8%
Grade 8 Teacher	3,207	285	8.9%
Other Middle School Teachers	6,248	638	10.2%
<b>Middle Grade Subtotal</b>	<b>16,476</b>	<b>1575</b>	<b>9.6%</b>
<b>High School Subtotal</b>	<b>16,737</b>	<b>1824</b>	<b>10.9%</b>
<b>Special Education Subtotal</b>	<b>11,153</b>	<b>1079</b>	<b>9.7%</b>
<b>Other Teachers Subtotal</b>	<b>9,528</b>	<b>753</b>	<b>7.9%</b>

**Age of Exiting Teachers in FY00**

Figure 2.3 graphs the counts of teacher age for the 8,595 teachers who left the FY00 public school workforce. The figure presents the typical U-shaped curve common for teacher attrition (Source: *Profile of Georgia Public School Personnel, PSC, 1989*). The graph peaks twice, once at the “younger” end where attrition of new teachers is high, and again at about age 55 where retirement attrition is high.

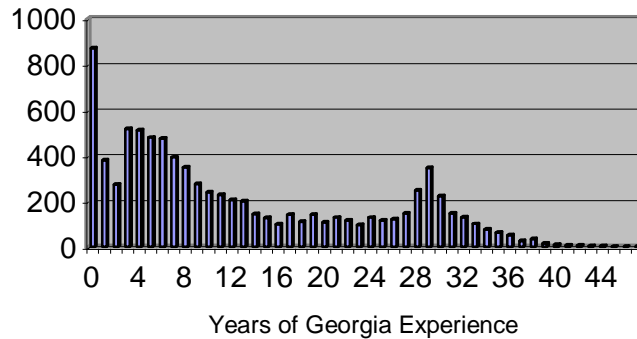
Figure 2.3. Attrition by Teacher Age, FY00



## **Experience Level of Exiting Teachers in FY00**

When years of Georgia experience were tabulated for teachers in the FY00 attrition group, the results showed patterns similar to the age distribution chart (see Figure 2.4). Many teachers fell into the experience range of 0 to 10 years. Another peak was evidenced near the 30-year experience mark and is associated with retiring teachers.

Figure 2.4. Attrition by Teacher Experience, FY00



The CPI data collected by the Georgia Department of Education records a new teacher as having zero years of experience. Therefore, a teacher in the 30<sup>th</sup> year of experience will actually appear on the CPI with the experience value of 29 years. Also note that the apparent “dip” at experience year 2 is artificial. As discussed in Chapter 1, the experience evaluation system common to many Georgia school districts allows a teacher to skip from 1 to 3 years and from 0 to 3 years of creditable experience under certain circumstances.

## **Attrition by RESA**

Attrition rates were not uniform among RESAs, as shown in Table 2.18. Attrition in Okefenokee RESA was well below the statewide overall rate, while Metro RESA, First District RESA, West Georgia RESA, Central Savannah RESA, and Middle Georgia RESA experienced the highest FY00 attrition.

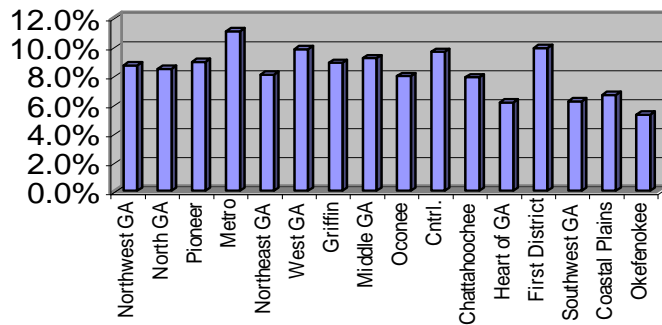
Table 2.18. Attrition by RESA, FY00

RESA	% Attrition
Northwest Georgia	8.7%
North Georgia	8.4%
Pioneer	8.9%
Metro	11.1%
Northeast Georgia	8.1%
West Georgia	9.8%
Griffin	8.9%
Middle Georgia	9.2%
Oconee	8.0%
Central Savannah	9.6%
Chattahoochee	7.9%
Heart of Georgia	6.1%
First District	9.9%
Southwest Georgia	6.2%
Coastal Plains	6.6%
Okefenokee	5.3%

***The Highest Teacher Attrition Rates by RESA in FY00***

As briefly mentioned in the previous section, Metro RESA led the state in teacher attrition percentages for FY00 (see Figure 2.5). The next highest losses were experienced in West Georgia RESA, First District RESA, and Central Savannah RESA. On average, one out of every nine teachers exited the FY00 workforce among the Metro RESA systems. This high rate of attrition was not due to retirement; since only 2% of teachers retired from Metro RESAs FY00 workforce.

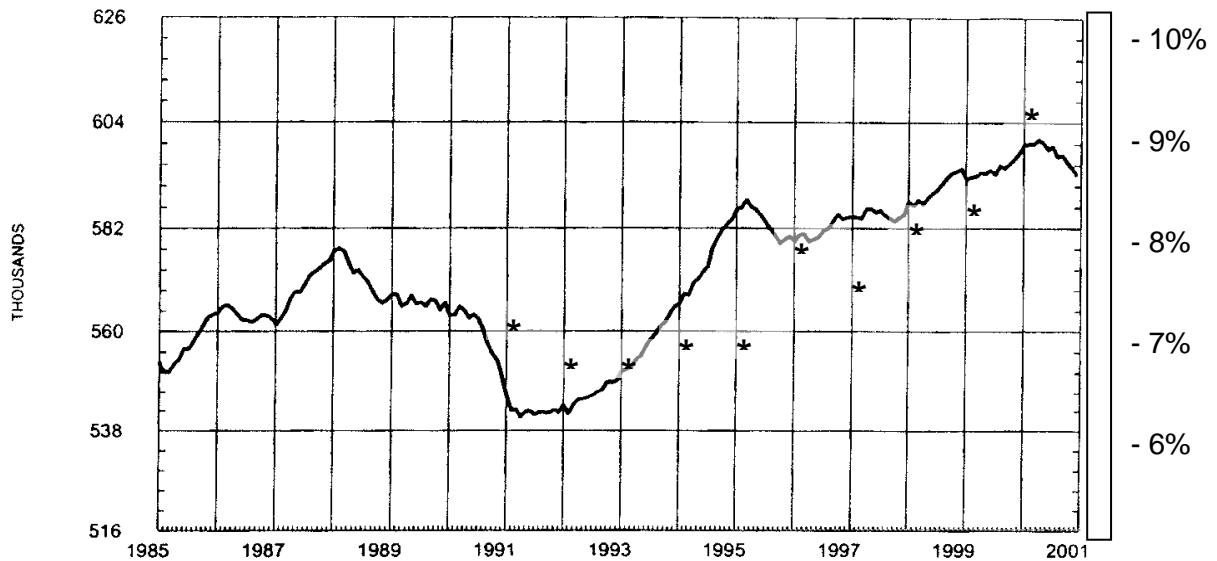
Figure 2.5. Teacher Attrition by RESA, FY00



## Economic Factors

The economy has an effect on teacher attrition and on teacher supply. As economic indicators dip during a slumping economy, older and younger teachers tend to stay in teaching jobs at greater rates. As the economy improves, teacher attrition worsens. The effect of the relationship is quite clear, although a slight time delay in either condition is observed in the cause and the effect, as shown in the graph below (see Figure 2.6).

Figure 2.6. Manufacturing Employment and Teacher Attrition



The manufacturing employment data obtained from the Georgia Department of Labor shows the number of Georgians employed in the manufacturing sector from 1985 through 2001. Attrition rates are overlaid for 1991 through 2000, with the symbol \* for each year's rate, according to the scale on the right of the chart (see Table 2.19). The relationship between these two variables is important in its predictive value for 2001 where the employment graph takes a downturn.

Table 2.19. Overall Teacher Annual Attrition Rates FY91 – FY00

FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
7.2%	6.7%	6.6%	7.0%	7.0%	8.0%	7.5%	8.1%	8.4%	9.4%

In summary, keeping track of attrition patterns in the workforce can help in anticipating and planning for workforce changes that may occur with retirement, economic cycles, etc.

# CHAPTER 3

## GEORGIA TEACHER SUPPLY

### Introduction

The retention of teachers employed in Georgia schools is the primary source through which to meet the state's annual demand for teachers. The Georgia teacher retention rate has stood at nearly 90% since 1986, when the PSC first examined certified employment information. In FY00, the teacher retention rate was 90.6%, the lowest retention percentage since 1986 (see Table 3.1 as an illustration of attrition rates from FY91 to FY00). To inversely view the indicator rate as one of teacher attrition, 8,595 teachers, or 9.4% of all FY00 teachers, did not reappear as employees on the FY01 CPI.

Table 3.1 Overall Teacher Annual Attrition Rates, FY91-FY00

FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
7.2%	6.7%	6.6%	7.0%	7.0%	8.0%	7.5%	8.1%	8.4%	9.4%

The FY01 teaching force numbered 94,689 certified teachers in grades Pre-Kindergarten through twelve (Pre-K-12), with 11,817 new hires. Because of FY00 attrition, human resource officers and principals at the school system level found it necessary in FY01 to replace 8,595 teachers who left the Georgia teaching force. Replacement hiring comprised 72.7% of all new teacher employment in FY01. In addition to demand caused by the need to fill continuing and replacement instructional requirements, increased demand for teachers caused by student enrollment growth and by policy changes resulted in a net increase of 3,222 new teaching positions in FY01.

In addition to the supply summaries and detailed tabulations contained in this chapter, a discussion of the impact on teacher supply that results from current economic changes and trends is also included.

### Teacher Shortages

In FY01, teacher shortages continued for the traditionally hard-to-staff content fields and geographic areas. Current shortage fields include, but are not limited to, special education, middle grades science, mathematics, and foreign languages. For the first time in over 15 years, some school districts reported difficulties in hiring early childhood teachers in FY01. Some false reasoning regarding student teacher production has led to the belief that Georgia colleges and universities have over-produced early childhood teachers at the expense of teacher production in other fields.

A pattern of not entering the workforce immediately is normal for teacher education graduates nationally. According to Emily Feistritz in the National Center for Education Information and in testimony before the U.S. Congress, "One-third to forty percent of people who graduate from college "fully qualified to teach" do not go into teaching - at least not right away" (for more information, go to <http://www.ncei.com/Testimony051399.htm>). In fact, 57.25% of the total number of Georgia's student teachers from FY95-FY00 (n=28,726) gained employment as teachers in the Georgia public school system during this period. Since more education majors are early childhood graduates, a larger number of immediate non-entries are found among this major field classification. There is no clear evidence that

education majors in any selected content or field could be persuaded to choose a major in a “shortage” field. For example, it is unlikely that preparing teacher candidates who prefer to teach younger or older students or a specific content area would be largely convinced to train and seek employment as middle grades science teachers. Furthermore, the data that many early childhood graduates were not hired into the Georgia teaching force in the year following program completion does not indicate an oversupply. It would be detrimental to future teacher supply volumes if these erroneous implications forced a reduction or cap on the volume of self-selected early childhood majors in Georgia.

**Implied Shortages by Field**

The following table (Table 3.2) shows the leading subject fields for which counts of teachers received Permits, Provisional certificates, and Probationary certificates in FY01.

Table 3.2. Teacher Counts by Permit, Provisional Certificate, and Probationary Certificates, FY01

Permits		Provisional		Probationary	
Subject	#	Subject	#	Subject	#
Spanish	124	Middle Grades	217	Interrelated Special Education	878
ESOL	38	Behavior Disorders	136	Gifted	472
French	32	Early Childhood	131	Middle Grades	339
Behavior Disorders	8	Interrelated Spec. Ed.	120	Early Childhood	100
		English	91	Mathematics	77
		Mathematics	78	Mental Retardation	76
		Biology	74	ESOL	69
		Business Education	60	Science	64
		Science	47	Behavior Disorders	61
		Spanish	38	English	40
		History	32	Learning Disabilities	36
		Chemistry	19		

This information serves as a strong indicator of shortage fields, because the Permits, Provisional, and Probationary certificates were issued when local superintendents affirmed that professionally certified personnel were not available for hire in these fields.

A similar table (Table 3.3) for recent years shows the consistency of shortages in these areas, and provides a basis for predicting shortage areas for short-term and long range planning. Below are the occurrences of Permits, Provisional, and Probationary certification from FY97 to FY01, with FY06 and FY11 projections.

Table 3.3. Permit, Provisional, and Probationary Certification by Selected Areas, FY97-FY11

	Actual Counts					Projections	
	FY97	FY98	FY99	FY00	FY01	FY06	FY11
<b>Permits</b>							
Spanish	15	30	79	125	124	260	397
ESOL	2	8	23	17	38	83	128
French	5	3	11	22	32	66	100
Behavior Disorders	0	0	0	3	8	18	28
<b>Provisional</b>							
Middle Grades	134	134	88	112	217	321	425
Behavior Disorders	91	81	82	96	136	192	249
Early Childhood	38	11	1	0	131	247	364
Interrelated Special Education	5	11	12	20	120	264	408
English	22	30	41	62	91	177	264
Mathematics	33	36	41	47	78	134	191
Biology	68	72	38	40	74	82	89
Business Education	27	23	33	44	60	101	143
Science	19	27	16	27	47	82	117
Spanish	18	32	46	40	38	63	88
History	11	12	12	22	32	58	85
Chemistry	24	21	11	8	19	13	7
<b>Probationary</b>							
Interrelated Special Education	530	686	775	910	878	1313	1748
Gifted	131	197	364	250	472	898	1325
Middle Grades	143	204	193	237	339	584	829
Early Childhood	87	62	51	69	100	116	133
Mathematics	17	40	49	63	77	152	227
Mental Retardation	50	76	79	76	76	109	141
ESOL	4	13	26	52	69	150	232
Science	45	42	37	75	64	88	112
Behavior Disorders	89	105	116	103	61	26	0
English	15	19	29	28	40	71	103
Learning Disabilities	35	38	36	30	36	37	39

**Implied Shortages by RESA**

Table 3.4 shows the distribution of Permits, Provisional, and Probationary certificates across the state by RESA. Nearly two-thirds of the Permits were issued to school systems in the Metro RESA. For Provisional and Probationary certificates, the distribution across RESAs was similar to the distribution of all teachers across RESAs.

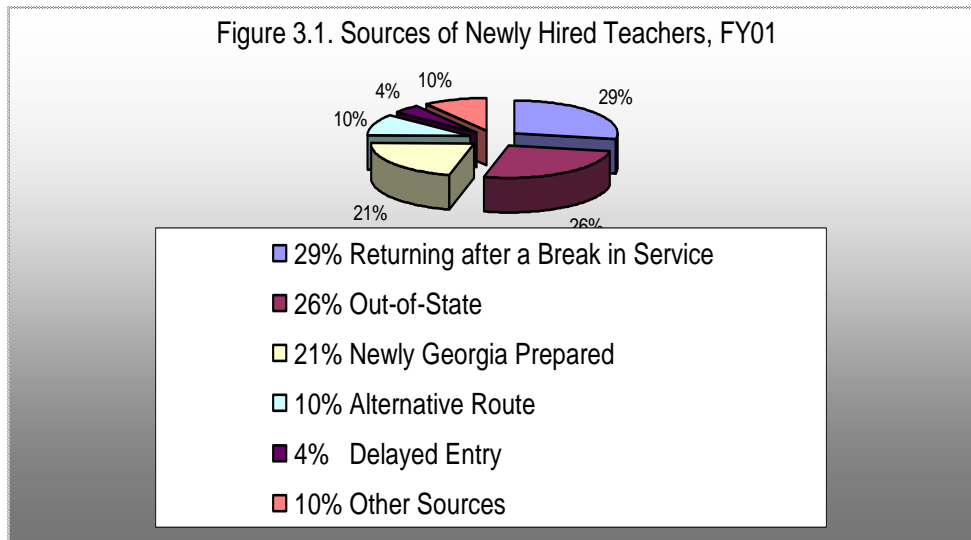


Table 3.4. Distribution of Permits, Provisional, and Probationary Certificates by RESA, FY01

RESA	Permit	Provisional	Probationary
Central Savannah	7	89	70
Chattahoochee	7	51	42
Coastal Plains	2	27	70
First District	5	156	219
Griffin	5	162	183
Heart of Georgia	0	26	31
Metro	182	860	735
Middle Georgia	4	71	87
North Georgia	16	42	153
Northeast Georgia	5	59	114
Northwest Georgia	13	107	194
Oconee	0	39	32
Okefenokee	1	26	64
Pioneer	26	66	86
Southwest Georgia	6	62	93
West Georgia	8	62	113

### Sources of Teachers Supply

Many sources supply Georgia's teaching force. The demand for teachers is met through the provision of continuing teachers (i.e., retention) and the hiring of new teachers. The largest new teacher supply in FY01 was from experienced Georgia teachers returning to the teacher force after a break in service (see Figure 3.1).



In FY01, and for the first time, Georgia hired more teachers from other states than teachers who were newly prepared in Georgia teacher education programs. Since FY97, student teacher production in Georgia colleges and universities has dropped from 5,175 to 3,784, a

decrease of over 25%. As school systems have sought other supply sources for new teachers, alternatively prepared teachers with induction certificates and provisionally certified teachers have become more numerous in the workforce. The percentage of teachers supplied through alternative routes has doubled from 5% in FY97 to 10% in FY01.

### Retention

As mentioned earlier, the retention of teachers in Georgia's public school system is a major source of supply. The following table (Table 3.5) shows retention numbers for teachers who continued from the FY00 workforce into the FY01 workforce. Predictions for retention are included for FY06 and for FY11.

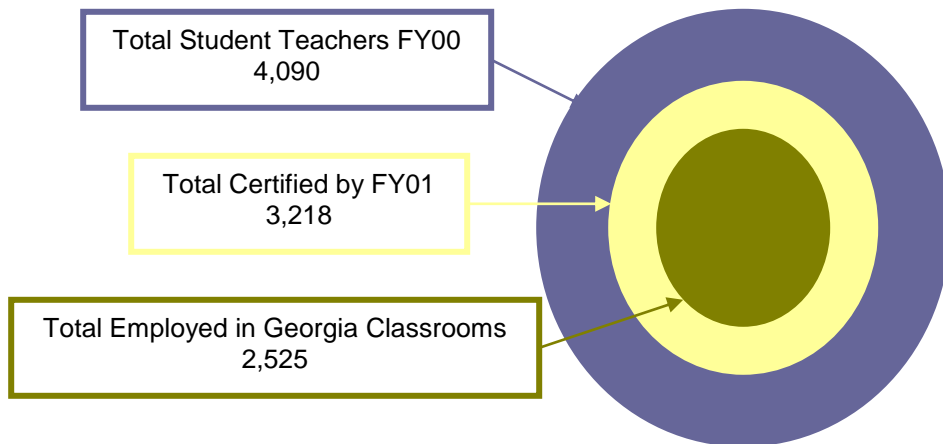
Table 3.5. Teacher Retention and Projections (Numbers are FTE Counts)

<b>Level &amp; Type</b>	<b>FY01 Retention</b>	<b>FY02</b>	<b>FY06</b>	<b>FY11</b>
Pre-K	1,131	1,179	1,390	1,708
Kindergarten	4,675	4,671	4,654	4,632
Grade 1	4,940	4,991	5,200	5,474
Grade 2	4,753	4,812	5,058	5,383
Grade 3	4,606	4,697	5,079	5,601
Grade 4	4,427	4,599	5,358	6,486
Grade 5	4,301	4,470	5,214	6,321
EIP (K-2)	2,481	2,481	2,481	2,481
Other Elementary	3,906	3,752	3,196	2,615
<b>Elementary Total (K-5)</b>	<b>34,090</b>	<b>34,474</b>	<b>36,241</b>	<b>38,994</b>
Grade 6	3,317	3,363	3,549	3,797
Grade 7	3,110	3,156	3,349	3,606
Grade 8	3,031	3,121	3,508	4,061
Other Middle	5,483	5,747	6,939	8,781
<b>Middle Total</b>	<b>14,941</b>	<b>15,387</b>	<b>17,345</b>	<b>20,245</b>
<b>Grades 9-12 Total</b>	<b>14,979</b>	<b>15,204</b>	<b>16,140</b>	<b>17,390</b>
Special Education Teachers	9,865	10,328	12,407	15,603
Instructional Specialist	4,488	4,626	5,225	6,084
Vocational Education Teachers	2,575	2,589	2,644	2,714
Other Teachers	560	653	1,200	2,570
<b>Total</b>	<b>82,629</b>	<b>84,440</b>	<b>92,591</b>	<b>105,308</b>

### Newly Prepared Georgia Teachers

Georgia's public and private teacher preparation institutions provided 4,090 student teachers in FY00 who were potential FY01 candidates for Georgia public schools. Of that group, 3,218 have achieved certification, and 2,525 were teaching in Georgia's public schools in FY01. This first-year "yield" (FY00 student teachers to FY01 Georgia classroom employed) percentage of 62% compares favorably with the national production-to-classroom average.

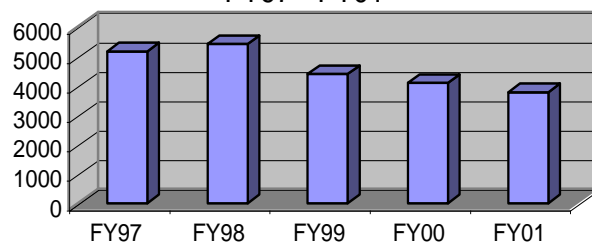
Figure 3.2. Newly Prepared Georgia Teachers



Although the 62% yield to actual Georgia teaching is substantial when compared nationally, the annual volume from Georgia's teacher preparation programs is currently lower than at any time in recent years. The downward trend for student production has continued since FY97, with FY01 student teacher production falling to 3,784 student teachers. The FY01 production (3,874) represents only 75% of the student teachers produced in Georgia (5,175) during FY97.

Of the FY01 graduating student teachers (those who student taught and completed teacher education programs between August 2000 and May 2001), over 400 appeared on the spring FY01 CPI report, indicating that they were not available applicants in the traditional first-time hiring period for employment in Fall FY02. In other words, 400 student teachers were immediately employed in Georgia schools during the FY01 school year in which they matriculated.

Figure 3.3 Georgia Student Teacher Production  
FY97 - FY01



### ***Student Teacher Production by Field***

Table 3.6 shows student teacher production by selected fields for FY98-FY01. An overall 10% decline of student teachers was realized in these fields during the four-year span. Note that only vocational education showed any production increase, with a 1% growth in student teachers. The data do not indicate that any significant number of early childhood majors have shifted to majors in special education, foreign language, or science. All of these fields

exhibited declines over the FY98-01 period, with the most significant declines in science, middle grades, and Grades 7-12 social sciences education.

Table 3.6. Student Teachers By Field, FY98-FY01

	FY98 Count	FY99 Count	FY00 Count	FY01 Count	Average Annual Percent Change From FY98
Early Childhood Education P-5	2,015	1,793	1,553	1,644	-6.1%
Middle Grades 4-8	950	793	673	571	-13.3%
English 7-12	212	208	185	159	-8.3%
Mathematics 7-12	121	124	118	118	-0.8%
Social Science 7-12	326	324	252	225	-10.3%
Science 7-12	162	126	146	88	-15.2%
Foreign Language	76	72	54	54	-9.6%
Vocational Education	98	92	105	101	1.0%
Instructional Specialist	517	438	448	399	-7.6%
Special Education	481	423	299	342	-9.6%
Speech 7-12	1				
Gifted P-12			28		
Others	456	1	229	83	
<b>Total</b>	<b>5,415</b>	<b>4,410</b>	<b>4,090</b>	<b>3,784</b>	<b>-10.0%</b>

### ***Student Teacher Production by Institution***

In recent years, student teacher production decreased significantly for most colleges and universities in Georgia (see Table 3.7). Notable exceptions were Kennesaw University and Mercer University where production numbers increased steadily and the annualized percentage change from FY98 was positive.

The “full” capacity in Georgia’s individual and collective teacher preparation institutions is not precisely known. However, data from ten years of PSC student teacher (Capstone) records indicate that the state’s annual production from traditional teacher preparation programs may reach capacity at about 5,500 students. This capacity may occur for a variety of reasons. These reasons include: the number of annual admissions allowed into teacher education programs, the flexibility in student teaching schedules allowed by respective institutions (two rather than three or four student teaching rotations annually), availability of institution faculty and staff members for clinical and classroom experiences, teacher preparation budget restrictions in higher education, willingness or capacity of schools and school systems to work with larger numbers of student teachers, etc. Admission standards may or may not directly impact the apparent “cap” over time.

Table 3.7. Student Teacher Production In Georgia Colleges and Universities, FY98-FY01

<b>Georgia Institution</b>	<b>FY98</b>	<b>FY99</b>	<b>FY00</b>	<b>FY01</b>	<b>Change from FY98</b>
University of Georgia	705	534	596	496	-29.6%
Kennesaw State University	310	321	337	349	12.6%
Valdosta State University	446	382	337	321	-28.0%
State University of West Georgia	463	298	225	275	-40.6%
Georgia State University	N/A	305	329	271	-11.1%
Georgia Southern University	379	323	370	244	-35.6%
Mercer University	144	229	215	215	49.3%
Brenau University	188	201	164	158	-16.0%
North Georgia College	238	144	147	141	-40.8%
Armstrong State	252	210	148	131	-48.0%
Georgia College	526	390	145	122	-76.8%
Piedmont College	132	120	94	116	-12.1%
Columbus State	146	104	126	99	-32.2%
Augusta State	178	164	110	97	-45.5%
Georgia Southwestern	145	130	95	87	-40.0%
Berry College	N/A	93	99	82	-11.8%
Albany State University	93	89	62	71	-23.7%
Brewton-Parker	115	90	35	66	-42.6%
Shorter College	50	53	56	63	26.0%
Clark Atlanta University	51	52	53	54	5.9%
Paine College	26	N/A	18	38	46.2%
Spelman College	37	33	29	34	-8.1%
Toccoa Falls College	33	31	23	30	-9.1%
Morris Brown	N/A	N/A	18	29	61.1%
Emmanuel College	49	33	17	29	-40.8%
Fort Valley State University	118	91	68	28	-76.3%
Covenant College	35	21	40	23	-34.3%
LaGrange College	23	33	34	22	-4.3%
Oglethorpe University	89	28	28	22	-75.3%
Clayton State	34	28	28	19	-44.1%
Agnes Scott	25	20	11	15	-40.0%
Thomas College	29	27	2	13	-55.2%
Wesleyan College	N/A	18	17	12	-33.3%
Emory University	N/A	10	12	12	20.0%

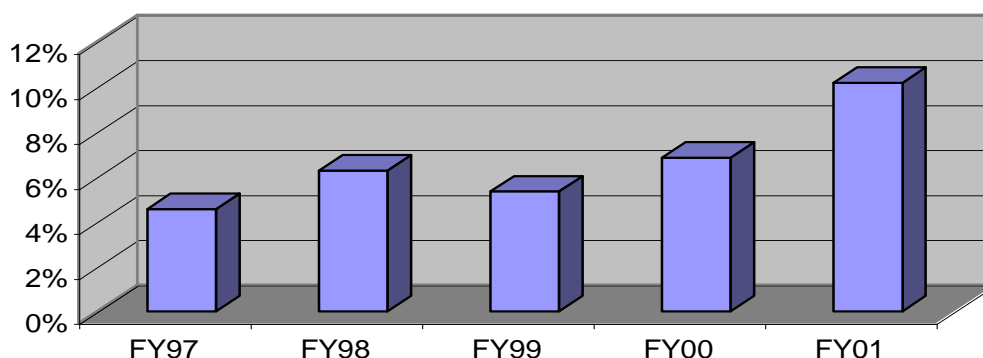
The annual hiring difficulties in school systems would ease significantly if annual production from Georgia public and private teacher preparation programs was elevated to the evidenced “cap”, or capacity, of 5,500 student teachers. An increase in the number of student teachers in teaching fields and/or content areas with evidenced or predicted hiring priority would significantly address the challenge to balance supply and demand by supplying qualified teachers in hard-to-staff classrooms and courses. In any event, the “cap” on student teacher production in Georgia’s teacher preparation programs must increase to meet the expected demand in future hiring needs. Annual production should be boosted to 5,200 student teachers in FY06 and to 6,600 in FY11 if traditional teacher preparation programs continue as a major supply source of Georgia teachers. It is prudent to immediately develop capacity

building strategies to assure these increases and to implement a sound process to increase production within a relatively short time frame.

### Alternative Preparation

A marked increase in the percentage of new teachers who achieved preparation and resulting certification through alternative routes was noted in FY01 (see Figure 3.4). To encourage the development of teachers to supply teachers through alternative routes, the Georgia Teacher Alternative Preparation Program (GTAPP) began in the summer of FY01. Local school systems, colleges and universities, Regional Education Service Agencies (RESAs), and the PSC responded to an expected FY02 teacher shortage by participating in the program as providers and recipients. The program is not intended to be a replacement for traditional teacher preparation programs. It is, instead, an additional option for individuals who hold bachelor's or higher degrees in non-education fields to add to their preparation and move into the teaching profession as certified teachers.

Figure 3.4. Alternative Route Teachers as a Percentage of All Newly Hired Teachers



Over 750 new prospective teachers who held a school system job offer, a non-education baccalaureate or advanced degrees, a passing score on PRAXIS I, and a minimum a 2.5 grade point average attended PSC-approved, summer Introduction to Education sessions during 2001. For each candidate, intensive mentoring will follow the introductory sessions and coursework conducted over a subsequent two-year period. Upon recommendation from the summer instructors and required background checks, the candidates entered Georgia classrooms under a two-year Induction Certificate in fall, FY02.

### New Teacher Hires

***New teacher supply is not spread evenly across the state. Over 40% of all new hires were in the metropolitan Atlanta area. The next highest number of new hires was in First District RESA, which includes Savannah-Chatham, Glynn County, and Camden County schools among its larger service areas. FY00 graduates of Georgia's teacher preparation programs were employed in the metropolitan Atlanta area in much larger numbers than in other regions of the state. School systems in the Metro RESA employed 850 of its 4,990 new hires from teachers prepared in Georgia's public and private traditional teacher preparation programs, taking almost one-fourth of the***

**available supply of new higher education graduates in Georgia. No other RESA neared that number of new Georgia graduate hires.**

Over one-half of the newly hired teachers from out-of-state were employed in the Metro RESA, which employed 35.8% of all Georgia teachers in FY01. The large new hire percentage in Metro RESA schools appears to be a feature of turnover. The need for high school teachers was especially high in the metropolitan Atlanta area. Overall, Metro RESA hired approximately 40% of new high school teachers from all sources. The 40% hiring rates held equally across each of the four core academic areas of English, mathematics, social sciences, and science. The following table (Table 3.8) shows the distribution of new teacher hires by RESA in FY01.

Table 3.8. New Teacher Hires by RESA, FY01

<b>RESA</b>	<b>#</b>	<b>%</b>
Central Savannah	520	4.40
Chattahoochee	319	2.70
Coastal Plains	259	2.19
First District	967	8.18
Griffin	616	5.21
Heart of Georgia	118	1.00
Metro	4990	42.23
Middle Georgia	423	3.58
Northeast Georgia	527	4.46
North Georgia	492	4.16
Northwest Georgia	889	7.52
Oconee	126	1.07
Okefenokee	164	1.39
Pioneer	648	5.48
Southwest Georgia	314	2.66
West Georgia	445	3.77
<b>Total</b>	<b>11,817</b>	<b>100.00</b>

### ***Subject Areas for Newly Hired Teachers***

Elementary grades (46.74%) and middle grades (8.63%) teachers accounted for over half of new teachers in FY01. Over 800 new hires were English teachers, and over 600 were mathematics teachers. Social science and science were the next highest counts of subjects of newly hired teachers. Table 3.9 shows the frequency of new teacher hires by subject.

Table 3.9. New Teacher Hires Distributed by Subject Taught, FY01

<b>Subject Matter</b>		<b>#</b>	<b>%</b>
<b>Regular Education Subjects</b>	Chorus	28	0.24
	Dance	6	0.05
	Drama Arts	28	0.24
	Education	38	0.32
	Elementary	5,523	46.74
	English	817	6.91
	ESOL	83	0.70
	Gifted	43	0.36
	German, Slavic & Classical Language	33	0.28
	Health	73	0.62
	High School (9-12) Miscellaneous	247	2.09
	Life Science	212	1.79
	Mathematics	613	5.19
	Middle Grades	1,020	8.63
	Military Science	2	0.02
	Music	238	2.01
	P-12 Miscellaneous	467	3.95
	Physical Education	296	2.50
	Physical Science	292	2.47
	Professional/Career Preparation	19	0.16
	Romance Language	225	1.90
	Science	48	0.41
	Social Science	536	4.54
Visual Arts	142	1.20	
<b>Special Education Subjects</b>	American Sign Language	10	0.08
	Personal, Interpersonal & Social Skills	169	1.43
<b>Vocational Subjects</b>	Agricultural Business	15	0.13
	Agricultural Sciences & Technology	16	0.14
	Business Administration	77	0.65
	Business Management	35	0.30
	Communication Technologies	11	0.09
	Computer & Other Information Sciences	26	0.22
	Construction Technology	17	0.14
	Home Economics	66	0.56
	Manufacturing Science	2	0.02
	Mechanical Occupations	25	0.21
	Marketing & Distribution	12	0.10
	Pr. Of Ed & Career Exploration	36	0.30
	Precision Production Occupations	14	0.12
	Protective Services	2	0.02
	Personal Services Occupations	16	0.14
	Technology Education	67	0.57
Not Specified (No Codes)		165	1.40
Not Applicable (Code 999)		7	0.06
<b>Total</b>		<b>11,817</b>	<b>100.00</b>



### ***New Teacher Grade Level Placements***

Over 5,000 newly hired teachers were placed in Pre-Kindergarten to fifth grade (Pre-K-5) jobs. This number represented over 40% of all new hires and more than twice the percentage for high school placements, the second largest job placement category. Middle school placements accounted for 17% of the newly hired teachers. For field specific subjects, the highest subject area taught by newly hired teachers was English/Language Arts with 817 placements. Mathematics placements were next (597) and Social Sciences comprised the third most new teachers (536). This sequence of subject areas exactly matches the subject areas of retirees, as recorded in files supplied by the Georgia Teacher Retirement System. Ironically, Georgia's student teacher production in the field of English has declined 25% over the last four years. Only 159 student teachers in English were completers in FY01. The following table (Table 3.10) depicts the subject matter and job placement of new teachers in FY01.

***Table 3.10. New Teacher Hires Distributed by Personnel Category/Grade Level, FY01***

<b>Personnel Category/Grade Level</b>	<b>#</b>	<b>%</b>
<b>Pre-K</b>	<b>195</b>	<b>1.65</b>
Kindergarten	631	5.34
Grade 1	746	6.31
Grade 2	681	5.76
Grade 3	719	6.08
Grade 4	620	5.25
Grade 5	578	4.89
Early Intervention Program	499	4.22
Other Elementary Assignment	618	5.23
<b>Elementary Total (K-5)</b>	<b>5,092</b>	<b>43.09</b>
Grade 6	435	3.68
Grade 7	432	3.66
Grade 8	303	2.56
Other Middle Grades Assignment	821	6.95
<b>Middle Grades Total</b>	<b>1,991</b>	<b>16.85</b>
<b>High School (9-12) Total</b>	<b>2,060</b>	<b>17.43</b>
Instructional Specialists	378	3.20
Special Education Teachers	1,768	14.96
Vocational Education Teachers	262	2.22
Other Teachers	71	0.60
<b>Total New Teacher Hires</b>	<b>11,817</b>	<b>100.00</b>

### ***Demographics of New Teacher Hires***

Of the 11,817 new FY01 teacher hires, 9,611 (81.3%) were women, 9,098 (77.0%) were white, and 2,426 (21%) were Black. It should be noted that the demographic characteristics of these newly hired teachers closely resemble the demographic profile of Georgia's total teacher workforce in FY01 (see Table 3.11). Over 7,000 were 25 or younger. The mean age of this group was 34 years, and the mode was 24 years. In order for the mean to be 34 with a

mode of 24, it is expected that a large number of these teachers would be older. In fact, 1,258 of the new hires were over 50.

Table 3.11. Demographic Profile of New Hires and the Total Georgia Workforce, FY01

Demographic Characteristic	New Teacher Hires %	Total Georgia Workforce %
<b>Gender</b>		
Female	81.3	82.39
<b>Ethnicity</b>		
White	77.0	78.49
Black	21.0	20.23

### ***Certification Levels of New Teacher Hires***

Table 3.12 details the certification levels of newly hired teachers. Over 70% of new hires are certified at the baccalaureate level, a continuing pattern.

Table 3.12. Certification Levels of Newly Hired Teachers

New Teacher Count	% of New Hires	Certificate Level	Educational Attainment
30	0.3	1	High School Diploma
52	0.4	2	Associate Degree
8,359	70.7	4	Bachelor Degree
2,964	25.1	5	Master's Degree
294	2.5	6	Specialist Degree
118	1.0	7	Doctorate Degree

### **Out-of-State Teachers**

Teachers generally migrate to Georgia in two conditions of certification – already fully certified in another state or newly trained in an out-of-state teacher preparation institutions and ready for a recommendation for certification. Certification rules in Georgia allow Georgia certification for both cases. By an interstate reciprocity agreement brokered by the National Association of State Directors of Teacher Education and Certification (NASDTEC), Georgia grants certification to holders of full professional educator certificates in other states. Special Georgia requirements must often be satisfied during the first year of employment in this state. By authority of the same NASDTEC agreement, Georgia grants professional certification to applicants recommended by higher education officials in approved teacher preparation programs in other states.

From these two out-of-state sources, Georgia hired over 3,000 new teachers in FY01, or 26% of all new 11,817 hires. Hiring across the state was varied, ranging from only four out-of-state hires from in the Heart of Georgia RESA to over 1,600 in the Metro RESA. In addition to these well-documented categories, other new teachers who were trained in other states may have received Provisional certificates and entered the workforce through an alternate route. Closely following the pattern of all new hires, teachers hired from other states were most often elementary teachers, followed by English, middle grades, and mathematics teachers.

## **Teacher Supply in Georgia's High Schools**

Turnover among high school teachers is slightly higher than for other segments of the teaching force. Therefore, it is critical to know trends and sources for the supply of high school teachers. The following table (Table 3.13) shows the FY01 high school teaching force in the four core academic areas, with full source detail. The number of hires in mathematics stands out in its differences from the other three core areas. Georgia hired more teachers in mathematics (365) than in either of the other core areas.

However, the number of mathematics teachers hired from FY00 graduates of Georgia teacher education programs (58) was noticeably less than the new hires in the other three core areas. Mathematics teachers returning from breaks in service (163) buoyed the supply. This imbalance merits more research into the attributes of these returning teachers. If the supply of returning teachers is not adequate for the future, and Georgia's teacher preparation programs do not increase the production of mathematics teachers, a severe shortage in high school mathematics teachers may soon develop.

Table 3.13. Sources of Supply for Specific High School Teaching Fields

<b>Supply Summary</b>	<b>English</b>	<b>Mathematics</b>	<b>Science</b>	<b>Social Science</b>
Continuing from FY00	3,034	2,651	2,396	2,482
Newly Hired	316	365	350	326
<b>Sources of Newly Hired</b>				
From Georgia College Supply, FY00	77	58	70	77
Alternate Route	95	98	126	61
Out-of-state certificate reciprocity	51	32	34	39
Out-of-state college recommendation	18	14	7	13
Other Sources (e.g., returning Georgia teachers)	75	163	113	136

In each of the four core academic subject areas, few (no higher than 25%) of the FY01 hires were new Georgia graduates in any of the four core content areas. In all cases, except social science, teachers certified by alternative routes outnumbered teachers newly prepared in traditional Georgia teacher education programs. Georgia attracts many out-of-state teachers who bring either a full certification or fresh college recommendation. In each of the four academic areas, the number of core content new hires from out-of-state was at least 50% of the number prepared in Georgia teacher education programs.

### ***Recent Student Teacher Production in High School Core Academic Subjects***

It is important to examine teacher production in light of the actual placements when student teachers become employed. The following table (Table 3.14) shows student teacher supply from Georgia's approved teacher education programs. Only 77, or 45%, of the 185 English student teachers prepared in FY00 were employed as Georgia high school teachers the next year (FY01). Eleven FY00 English student teachers became middle grade teachers in FY01. Six of the 117 mathematics student teachers from FY00 became middle grade teachers in FY01 and 58 became FY01 high school teachers. This hiring pattern is quite reasonable,

since the certification level for high school preparation extends down into the 7<sup>th</sup> and 8<sup>th</sup> grades (e.g., Mathematics (7-12)).

Table 3.14. Production of Core Content Teachers from Georgia Teacher Preparation Programs

Content Area	FY99	FY00	FY01
English	208	185	159
Mathematics	125	117	118
Science	125	146	88
Social Science (including History)	324	252	269

### ***Geographical Distribution of Newly Hired High School Teachers***

The following tables (Tables 3.15 and 3.16) show (a) the distribution of newly hired high school teachers by RESA, aggregated for all subject areas and (b) the disaggregated number of new hires by the four core academic areas.

Table 3.15. Distribution of All Newly Hired High School Teachers by RESA (All Subjects), FY01

RESA	#	%
Northwest Georgia	165	7.2
North Georgia	84	3.6
Pioneer	124	5.4
Metro	949	41.2
Northeast Georgia	81	3.5
West Georgia	91	4.0
Griffin	123	5.3
Middle Georgia	102	4.4
Oconee	37	1.6
Central Savannah	121	5.3
Chattahoochee	81	3.5
Heart of Georgia	23	1.0
First District	162	7.0
Southwest Georgia	81	3.5
Coastal Plains	45	2.0
Okefenokee	34	1.5
<b>Total</b>	<b>2,303</b>	<b>100.00</b>

Table 3.16. Distribution of Newly Hired High School Teachers in the Four Core Areas by RESA, FY01

RESA	English	English %	Math	Math %	Science	Science %	Social Science	Social Science %
Northwest Georgia	30	7.7	22	6.0	26	7.4	27	8.3
North Georgia	14	3.6	16	4.4	19	5.4	12	3.7
Pioneer	20	5.1	14	3.8	17	4.9	18	5.5
Metro	167	42.8	158	43.4	138	39.4	124	38.0
Northeast Georgia	9	2.3	15	4.1	10	2.9	14	4.3
West Georgia	19	4.9	10	2.7	15	4.3	11	3.4
Griffin	27	6.9	16	4.4	22	6.3	19	5.8
Middle Georgia	10	2.6	17	4.7	18	5.1	11	3.4
Oconee	5	1.3	7	1.9	2	0.6	8	2.5
Central Savannah	22	5.6	22	6.0	18	5.1	16	4.9
Chattahoochee	9	2.3	13	3.6	8	2.3	11	3.4
Heart of Georgia	6	1.5	4	1.1	6	1.7	1	0.3
First District	26	6.7	27	7.4	23	6.6	25	7.7
Southwest Georgia	15	3.8	16	4.4	14	4.0	14	4.3
Coastal Plains	1	0.3	3	0.8	8	2.3	11	3.4
Okefenokee	10	2.6	4	1.1	6	1.7	4	1.2
<b>Total</b>	<b>390</b>	<b>100.0</b>	<b>364</b>	<b>100.0</b>	<b>350</b>	<b>100.0</b>	<b>326</b>	<b>100.0</b>

The RESA distribution of high school teachers over 55 years of age shows that attrition in the four core academic areas will likely continue over the next five years, at about the FY00 statewide rate of 10.9% for high school teachers in general. In every RESA, except two, over 10% of the high school English teachers are over 55 years old. In the Heart of Georgia RESA, 20% of English teachers were over 55 years old. Additionally, 16.5% of the mathematics teachers are over 55 years old in Middle Georgia RESA.

As indicated in Table 3.17, over 10% of all English teachers were newly hired in 9 of the 16 RESAs.

Table 3.17. New English Teachers as Percentage of All English Teachers by RESA, FY01

<b>RESA</b>	<b>All English Teachers</b>	<b>New English Teachers</b>	<b>New English %</b>
Northwest Georgia	203	30	14.8
North Georgia	146	14	9.6
Pioneer	155	20	12.9
Metro	1188	167	14.1
Northeast Georgia	127	9	7.1
West Georgia	124	19	15.3
Griffin	205	27	13.2
Middle Georgia	146	10	6.8
Oconee	47	5	10.6
Central Savannah	203	22	10.8
Chattahoochee	142	9	6.3
Heart of Georgia	60	6	10.0
First District	267	26	9.7
Southwest Georgia	171	15	8.8
Coastal Plains	97	1	1.0
Okefenokee	69	10	14.5

As shown in Table 3.18, over 10% of all mathematics teachers were newly hired in 10 of the 16 RESAs.

Table 3.18. New Mathematics Teachers as Percentage of All Mathematics Teachers by RESA, FY01

<b>RESA</b>	<b>All Mathematics Teachers</b>	<b>New Mathematics Teachers</b>	<b>New Mathematics %</b>
Northwest Georgia	191	22	11.5%
North Georgia	126	16	12.7%
Pioneer	152	14	9.2%
Metro	1078	158	14.7%
Northeast Georgia	125	15	12.0%
West Georgia	112	10	8.9%
Griffin	175	16	9.1%
Middle Georgia	133	17	12.8%
Oconee	42	7	16.7%
Central Savannah	176	22	12.5%
Chattahoochee	128	13	10.2%
Heart of Georgia	50	4	8.0%
First District	136	27	19.9%
Southwest Georgia	146	16	11.0%
Coastal Plains	92	3	3.3%
Okefenokee	54	4	7.4%

As shown in Table 3.19, over 10% of all science teachers were newly hired in 12 of the 16 RESAs

Table 3.19. New Science Teachers as Percentage of All Science Teachers by RESA, FY01

<b>RESA</b>	<b>All Science Teachers</b>	<b>New Science Teachers</b>	<b>New Science %</b>
Northwest Georgia	165	26	15.8
North Georgia	113	19	16.8
Pioneer	132	17	12.9
Metro	1005	138	13.7
Northeast Georgia	102	10	9.8
West Georgia	106	15	14.2
Griffin	155	22	14.2
Middle Georgia	131	18	13.7
Oconee	31	2	6.5
Central Savannah	164	18	11.0
Chattahoochee	111	8	7.2
Heart of Georgia	51	6	11.8
First District	223	23	10.3
Southwest Georgia	126	14	11.1
Coastal Plains	81	8	9.9
Okefenokee	50	6	12.0

As shown in Table 3.20, in 11 of the 16 RESA's, over 10% of all social science teachers were new hires.

Table 3.20. New Social Science Teachers as Proportion of All Social Science Teachers by RESA, FY01

<b>RESA</b>	<b>All Social Science Teachers</b>	<b>New Social Science Teachers</b>	<b>New Social Science %</b>
Northwest Georgia	172	27	15.7%
North Georgia	117	12	10.3%
Pioneer	141	18	12.8%
Metro	996	124	12.4%
Northeast Georgia	110	14	12.7%
West Georgia	102	11	10.8%
Griffin	169	19	11.2%
Middle Georgia	125	11	8.8%
Oconee	42	8	19.0%
Central Savannah	161	16	9.9%
Chattahoochee	116	11	9.5%
Heart of Georgia	46	1	2.2%
First District	249	25	10.0%
Southwest Georgia	134	14	10.4%
Coastal Plains	77	11	14.3%
Okefenokee	51	4	7.8%

## **Supply Forecast Issues**

Hiring patterns depicted earlier in this chapter show that traditional preparation programs do not produce enough teachers to meet the demand in high school content areas. To hire enough teachers annually, Georgia school systems depend on teachers returning from breaks in service, out-of-state veteran and new teachers, and the supply of alternatively prepared teachers. To avert the possibility of a diminished supply from all other sources, it is crucial to increase content-specific student teacher production from traditional teacher preparation programs in Georgia's public and private institutions of higher education.

As discussed in Chapter 2, a slumping economy that is expected to continue for another year and is exacerbated by the unpredictable nature of current international conflicts will also tend to increase teacher retention and entry rates slightly, thus increasing supply and reducing demand at all levels. This factor may also encourage retirement-ready teachers to delay retirement for a year or two, thereby reducing the demand for new teachers for the short term. However, the related slowdown in attrition and increase in the number of individuals who enter teaching may provide a perilously incorrect read of need in the current assessments and projected teaching force.

Educator marketing and recruitment efforts underway in the Professional Standards Commission and in the University System of Georgia are expected to significantly impact the supply of teachers in high school and other core areas within three years. Furthermore, the education funding and budgets in several neighboring states are based heavily on sales taxes. These states may have difficulty establishing pay raises for their teachers during the next two years. This unfortunate downturn may encourage teachers in those states to migrate to Georgia, adding to the Georgia supply pool. This phenomenon has been evidenced already, with a flow of teacher applicants from one bordering state. It is anticipated that more certification-ready applicants will migrate to Georgia in the next two years. Though a harmful trend for the states that experience a depletion in their own teacher supply pools, this movement of teachers from out-of-state is important to Georgia. However, this movement may reverse as the regional and national economy improves. It will be helpful to continuously legislate teacher pay raises to keep the incentive alive for teachers to move to and remain in Georgia.



# CHAPTER 4

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

The combined popularity of metropolitan Atlanta as a major center in the Southeast and of Georgia as a good employment and life-style location has led families to relocate from other states and nations, swelling the Pre-K student enrollment in Georgia public schools to levels far above the natural growth in previous years. The teacher demand generated from this student enrollment growth will likely sustain throughout and beyond the current slow economy.

Economic and current world political conditions may cause current high levels of teacher attrition and shortage to abate somewhat in the next year or two. Based on previous patterns of teacher preparation and employment seekers, an upturn in the national and state economies will result in higher overall teacher attrition, more retirements, and fewer teacher candidates than in this current economic downturn. A high demand for teachers will continue in Georgia public schools to fill the classrooms created by increasing student enrollments and evolving policy initiatives that are designed to improve student achievement.

The current slow economy will likely exacerbate the student enrollment decline already present in a few rural South Georgia regions as families move to city areas to find jobs. Slowly this will affect teacher counts in those regions, and teachers themselves may occasionally move to city areas to find jobs. These shifts would have implications about school funding which are beyond the scope of this report, but such relocations would certainly rearrange the demographics of Georgia's teaching force.

Statewide Hispanic student enrollment is growing at a rate that will create a demand for many more ESOL (English for Speakers of Other Languages) and Spanish-speaking educators than are in the current teaching, administrative, and certified workforce. This demand will redefine staffing and professional development directions for all categories of Pre-K-12 teachers and will adjust hiring strategies for most Georgia school systems

Teacher preparation programs in Georgia's public and private institutions of higher education are currently producing teachers at levels far too low to meet the current and growing demand for professional teachers. In addition to overall low quantities, the production trends indicate mismatches of supply and demand. For example, among middle grades student teachers, far too few mathematics and science concentrations have been sought by preparing teachers or issued by preparing institutions to adequately approach demand and supply the state's needs in those critical and shortage fields. The importance and impact of alternative preparation programs are already evidenced in teacher supply data, and will continue to serve an essential role in balancing Georgia's teacher supply and demand.

The retention of qualified teachers in Georgia schools is of ongoing concern. Attrition from and turnover in any workforce is expected, but the rising loss of qualified teachers in Georgia can have a dramatically negative impact on student achievement and efforts to improve school quality. Local and state costs were incurred In FY01 to recruit, employ, and place new hires in positions vacated by the 8,595 teachers who left Georgia CPI employment roles in FY00. In addition, human resource officers and principals spent nearly 73% of all recruitment

and hiring time replacing teachers who were not retained from the FY00 to FY01 school years. In a recently published study of retention in the teaching force, teachers across Georgia reported primary reasons for attrition not caused by family or retirement reasons. Young, older, experienced, and less experienced teachers noted their teaching and learning goals and preferences to continue as career classroom professionals. They also wrote and spoke of unsupported and non-supportive workplace conditions that cause teachers to seek other employment or professional options, including:

- Student behavior and discipline
- Board-level, administrative, and parent support as well as involvement
- Mentoring and professional development needs
- Adequate flexibility and funding for staff, supplies, and materials to meet the needs of all learners
- Fair and equitable evaluation systems and processes
- Instructional autonomy and involvement in curricular decision-making processes
- Intrinsic and extrinsic compensation and professional rewards throughout a teaching career
- Advancement and training opportunities to professionally grow and prosper, while remaining in the classroom as a career teacher
- A general lack of respect and support for their chosen profession and the requirements for good teachers who strive for sound practice and achievement in a diverse student and community population (Phase 1 Teacher Retention Study, Division for Educator Workforce Research and Development [EWRAD], Georgia Professional Standards Commission, 2001)

### **Recommendations**

The volume of new teachers hired annually will require Georgia to continue importing teachers from other states with as little bureaucratic hindrance as possible, and to increase the numbers of new teachers prepared in alternative routes. The quantity of alternatively prepared teachers was approximately 1,200 in FY01. Policies and programs should be institutionalized to increase the number by 500 annually to a stable level of at least 2,500 teachers annually by FY05. The Georgia Teacher Alternative Preparation Program (Georgia TAPP) should be enhanced to reach that level and to increasingly provide teachers across Georgia schools and content areas.

The high numbers of new hires will place added burdens on school system hiring offices and the state certification division. Procedures should be automated to the highest possible degree, employing electronic applications, electronic submission of transcripts, and college recommendations to convert from paper processes to direct electronic certification. Alternatively prepared teachers whose records are examined by college personnel and school system personnel should be directly certified in the provisional status by the college, that supervises candidates' training, and without paper submission to slow the process.

Colleges should begin immediately to increase teacher education enrollments and put procedures in place to assure full graduating classes of teacher candidates. Student teacher output quantities should reach 5,200 teachers by FY06 and 6,600 by FY11. Middle grades education departments should be given guidance and financial assistance to boost the numbers of mathematics and science concentrations among teacher preparation. Similar efforts should be made by secondary education departments in virtually all fields, with special

attention given to English, science, mathematics and foreign languages. Federal and private grants should be vigorously sought to fund these efforts and to help support students who choose these majors.

Staff development funds should be directed to teachers in RESAs where out-of-field teaching is highest. State goals should be established for the use of such funds, which will guarantee that teachers who are teaching courses out of field will become professionally certified in those fields. School districts should plan for multiple-field certifications for as many teachers as possible, with financial inducements for teachers to become professionally certified in more than one subject by FY06.

The current 20% loss rate of new high school teachers must be reduced to no more than 10% by FY06. Many alternatively prepared teachers work in high schools, and more structured mentoring programs will be needed for these teachers. First year, traditionally prepared teachers are exiting, too, and could benefit from the same formal induction programs. Staff development funds should be redirected to support a much more comprehensive mentoring program in Georgia high schools. The current system is clearly not working adequately to curb the loss of new high school teachers.

All Georgia teacher education programs should accept the supervision and instructional activities, that occur during a formal induction program for an alternatively prepared teacher as a valid substitute for student teaching; and reduce the program requirement course count accordingly. Present practices too often require a provisional teacher, even with one or two years of teaching experience, to resign his or her teaching position with a school system in order to enroll in a traditional student teaching class. This practice poses a substantial financial and psychological hindrance to young teachers, many of who are married with families and who are transitioning into teaching from a lifestyle, which mandates continuous economic sustenance.

The *Status Report of the Teaching Force in Georgia – 2001* is the second annual profile of Georgia's public school teachers, and is prepared by the Division for Educator Workforce Research and Development (EWRAD). EWRAD is a division of the Georgia Professional Standards Commission (PSC), and is a workforce supply and demand component of the Title II Teacher Quality Enhancement Grant, a P-16 initiative of Georgians working together to improve education in Georgia public schools and institutions of higher education.

Discovering and announcing the attributes of Georgia's teaching workforce are necessary steps toward assuring high teacher quality across the state. Georgia has many teachers. The educator workforce exceeds 110,000 in number, with over 90,000 teachers. Even small changes in some attributes of the teaching force may signal a need for policy shifts, revision, and refinement in teacher preparation and certification, and a review of education programs, practices, and offerings. Annual reporting in the EWRAD *Status Report of the Teaching Force in Georgia* provides the mechanism by which the vital signs of the teacher workforce are continually monitored.



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*Georgia's Teacher Quality Plan*, a component of the P-16 Initiative  
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